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The OIL and GAS JOURNAL

PRODUCING REFINING ENGINEERING MARKETING

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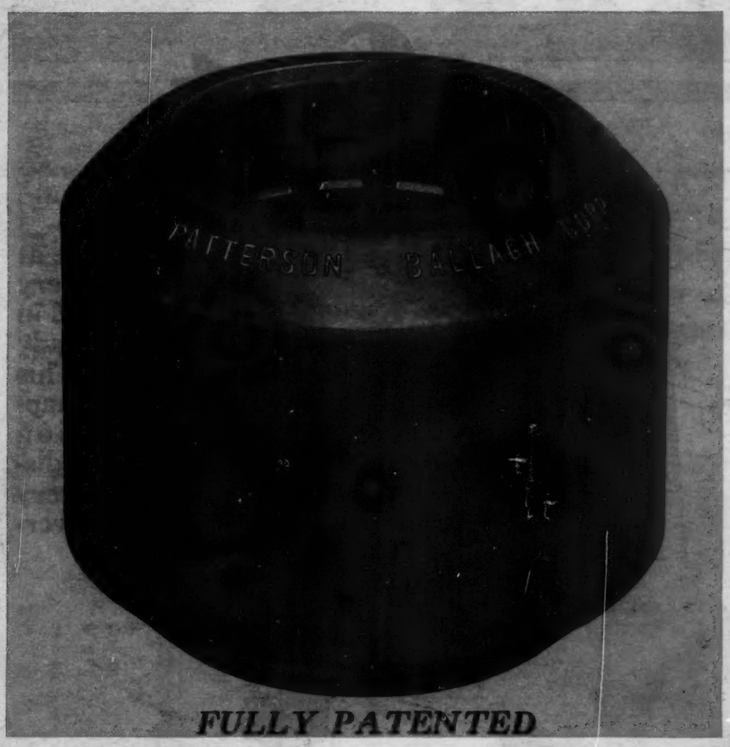

FULLY PATENTED

There is only ONE simple pipe & casing Protector

→ → → → → *the original*

BETTIS

"Best bet yet!"

What could be simpler than a ring of special processed rubber Tightly gripping The Pipe

→ → →

BETTIS PROTECTORS

No Hinges · No Metal · No Pins · No Wire · No Knobs · No Gadgets

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Advertisers' Index on Page 33

Table of Contents on Page 34

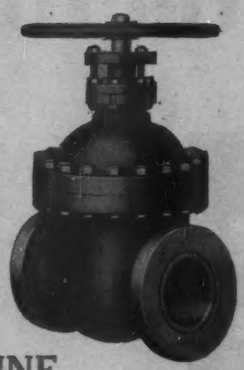
CHAPMAN VALVES

See them at

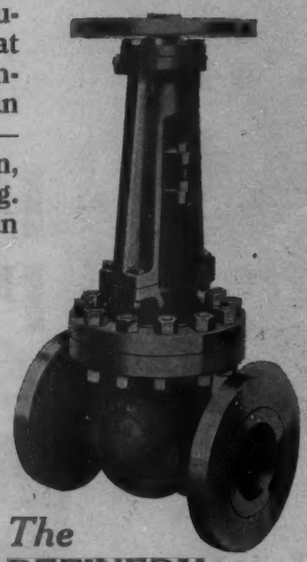
the Oil Equipment and Engineering Exposition, at Los Angeles, March 16 to 23, inclusive. The Chapman exhibit at this show will contain the complete line of the latest Chapman Valves for the oil industry—covering valves for production, transportation, and refining. Every up-to-the-minute oil man will want to see this exhibit.

Get them at

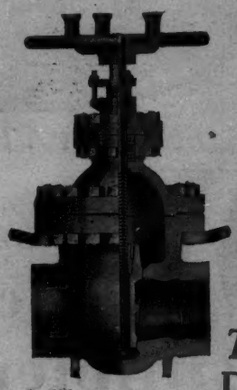
our new warehouse at Houston, Texas, where every type of Chapman Valve used in the oil industry is stocked ready for immediate shipment. This big new addition to the Chapman system of distribution backs up our agents and distributors throughout every western field with almost overnight service.



The PIPE LINE VALVE



The REFINERY VALVE



The DRILLING VALVE

You play safe with Chapman Valves. Every engineer knows that in selecting them he is assured not only of the highest grade of material and workmanship in the valves he depends upon, but also of their being designed along the lines of the very latest service-giving developments.

Nitralloy — exclusively a Chapman development — is a case in point. This almost diamond-hard mounting metal gives valves many times their former life. Write us—or our distributors—for details.

The Chapman Valve Manufacturing Co.
Indian Orchard, Mass.

Champon Valves for Oil Service Carried in Stock

Los Angeles—2314 East Eighth St.
San Francisco—525 Fourth Street
Tulsa—115 West First St.
Houston — 2103 Esperson Bldg.

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Pittsburgh Detroit
Atlanta Philadelphia Chicago
Syracuse New York Boston

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THEY MUST TEST
TO A SINGLE STANDARD...
the standard of WALWORTH QUALITY

• The line of Walworth valves today is fundamentally a quality line. • All of our products are subject to certain standard Walworth tests which assure satisfactory service. • In making valves, however, we go a step farther and test every one of them individually before shipment. • This means that when you put a Walworth valve on your oil lines it will take up its share of responsibility as unfailingly as though you had picked it out and tested it yourself. •

Specify

WALWORTH
VALVES
FITTINGS
AND TOOLS

for OIL

FIG. 207 R.

• FERRO REGRINDING VALVE •

A valve that gives long service at low cost. • Its iron body makes it less expensive to produce than a bronze valve and withstands erosion from chemical contents damaging to bronze. The Ferro has a renewable regrinding seat and disc of Sigmalloy 222 ... a nickel alloy, that also combats the deterioration to which ordinary valve parts succumb. In oil and gas service the Ferro valve is recommended for 200 pounds non-shock working pressure.

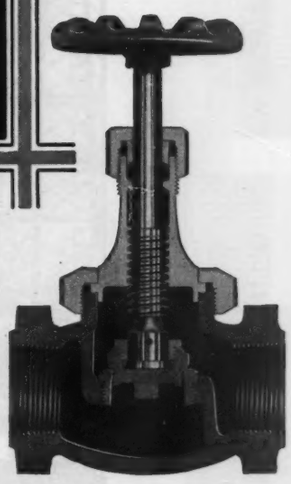


FIG. 207 R SECTIONAL

WALWORTH

Walworth Company, General Sales Offices: 51 East 42nd St., New York
Plants at Boston, Mass.; Kewanee, Ill.; Greensburg, Pa.; and Attalla, Ala.
Walworth Company Limited, 620 Cathcart St., Montreal, P. Q.
Walworth International Co., 11 Broadway, New York, Foreign Representative
... Distributors in Principal Cities of the World ...

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879.

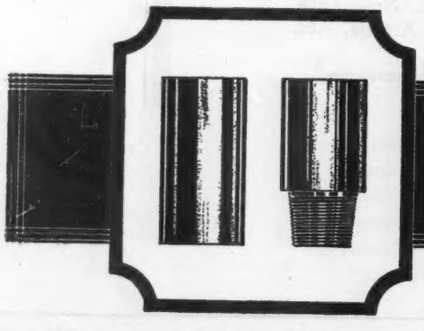
In the field

SPENGLER

Stands for STRENGTH

Where the field test proves greater tensile strength—less leakage—and greater pressure at all times—you will usually find that SPENGLER Heat-Treated TOOL JOINTS are on the string!

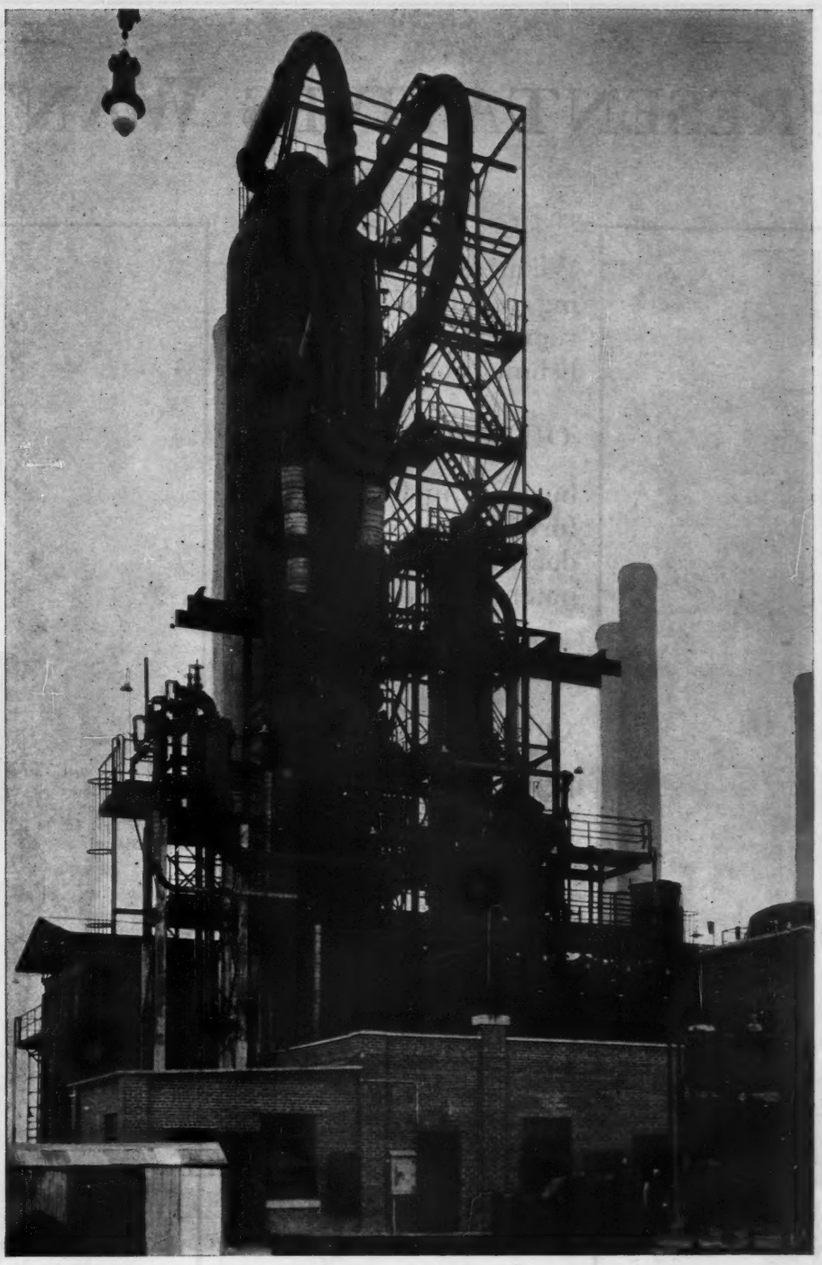
Scientific treatment of a specially developed steel alloy insures more dependable service and better results throughout the entire drilling operation.



SPENGLER TOOL CO.

OKLAHOMA CITY, OKLAHOMA

SPENGLER TOOL JOINTS MEET A.P.I. SPECIFICATIONS



Atmospheric and Vacuum Distillation Units

5,000 barrels of crude per day is the capacity of the two stage distilling unit shown above. Kerosene, gas oil, and five lubricating oils of various viscosities are continuously recovered to specification.

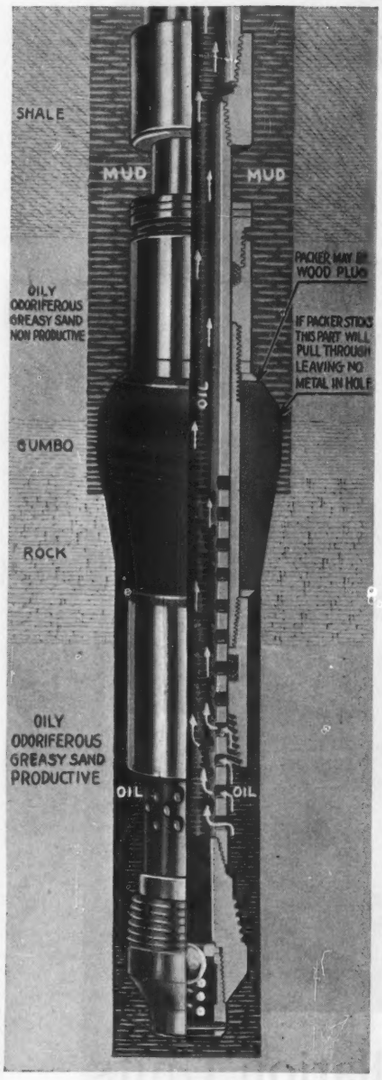
The Wheeler barometric condenser is shown at the left of the vacuum tower. The heat exchangers are placed in front of the towers. One of the tube stills can be seen to the left of the tower.

This distilling unit is another installation designed and erected by the Foster Wheeler Corporation.

FOSTER WHEELER CORPORATION
165 Broadway, New York, N. Y.
Branches in Principal Oil Centers

FOSTER WHEELER

REPRESENTATIVES WANTED!



We are desirous of licensing reputable persons to represent us in the establishment of the

OIL WELL TESTING

business in the following foreign countries and under the following foreign patents:

Country	*Patent No.*
VENEZUELA	840
ROUMANIA	13150
INDIA	12498
MEXICO	26274
COLOMBIA	2213
GREAT BRITAIN	279175
FRANCE	596104
ARGENTINE	27810

Patents pending in other countries.

Drill Stem (empty going in well) Can Rotate Drill Stem During Entire Test if so Desired
Drill stem lowers this distance as soon as tester opens
Packing Gland
Perforated Pipe Covered Going in Well Can Not Choke Up Before Flow Test Is Started
Packer (may be wood, canvas, rubber or any open hole packer)
Close Fitting Sleeve Retains Sample of Flow Uncontaminated
After Setting Packer Rotate Drill Stem and Unscrew Here

We shall announce in the very near future a new policy in the United States, as we expect to manufacture a number of different sizes and types of TESTING DEVICES which will meet the demand of the trade as to price and patent protection.

Patent Application pending in the United States since February, 1926.

"WE WERE THE FIRST TO USE THIS METHOD IN THE TESTING OF OIL AND GAS WELLS"

ERLE P. HALLIBURTON CO.

DUNCAN, OKLA.

Mighty Trucks *for the* Oil Country

Oil-country going isn't the sweetest in the world—it takes *mighty* trucks to get boilers, mud hogs, cable drums, rigging, line pipe, and what-not through bottomless mire and muck to location *on time*. Anyone who has driven trucks in the fields knows what a truck must have—owners of Internationals know these trucks stand the gaff and can't be beat for oil-field hauling.

It is significant that there are thousands of Internationals in the oil fields and that more of them are going into this service every day. It means that they have licked the oil-country going and are staying on the job the greatest number of working days.

International performance is matched by International service—Company-owned branches are scattered throughout the oil country—ready, with large stocks of parts and trained mechanics, for any emergency. No matter where Internationals are, at the home base or away, their owners are always assured of the same first-class service. Get acquainted with International Trucks now. They will do for you what they are doing for every owner.

McCormick-Deering Power in the form of Industrial Tractors and Power Units operates a wide variety of equipment for oil-field work. Available at Company-owned branches and distributors throughout the oil country.

The *Triple Diamond* emblem found on every International Truck is a symbol of *performance, economy* and *service* — the quality mark of the truck industry.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(Incorporated)
606 So. Michigan Ave. Chicago, Illinois

INTERNATIONAL

INTERNATIONAL TRUCKS

Agathon Bits

—End the Delays that Hold up the Job

FORGET the log if the bit steel is Agathon—for Agathon Alloy Steel was developed to cut the meanest formations without asking for quarter.

Developed in the laboratories of the world's largest manufacturer of alloy steels, by metallurgists specializing in oil field requirements, Agathon Alloy Steel can be depended upon to drill more hole with fewer pullings and dressings.

Agathon Alloy Steel is used as standard by many leading manufacturers of drilling tools and fishing tools. Specify that your next bit steel be genuine Agathon.

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Massillon, OHIO

World's Largest and Most Highly Specialized Alloy Steel Producers

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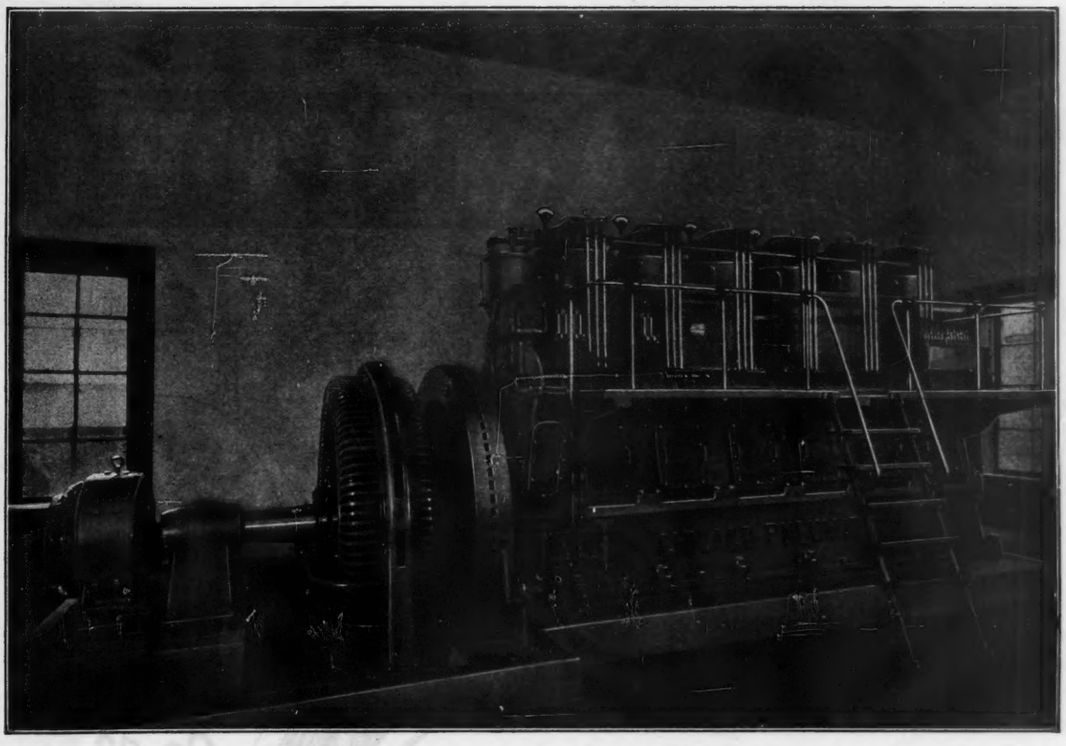


CP Diesel Engine, 450 H. P., Run in Parallel with Hydro-Electric Plant

Generating High Tension Power at Low Cost

A PROMINENT utility company purchased a CP Diesel Engine some time ago for an isolated power station. It proved so satisfactory that a second was ordered for another location, then a third. Performance records of these three have been so exceptionally good that a fourth was recently installed (shown above).

CP Diesel engines are ideally designed and built for small, privately owned power plants, isolated power stations, central stations as stand-by and auxiliary units, mills of every description, mines, etc. For economy of fuel, simplicity of operation, compactness, dependability and instant readiness for service, CP Diesel Engines are unequalled. Send for Bulletins illustrating and describing the 2, 3, 4, 5 and 6-cylinder types, from 80 to 450 horsepower.

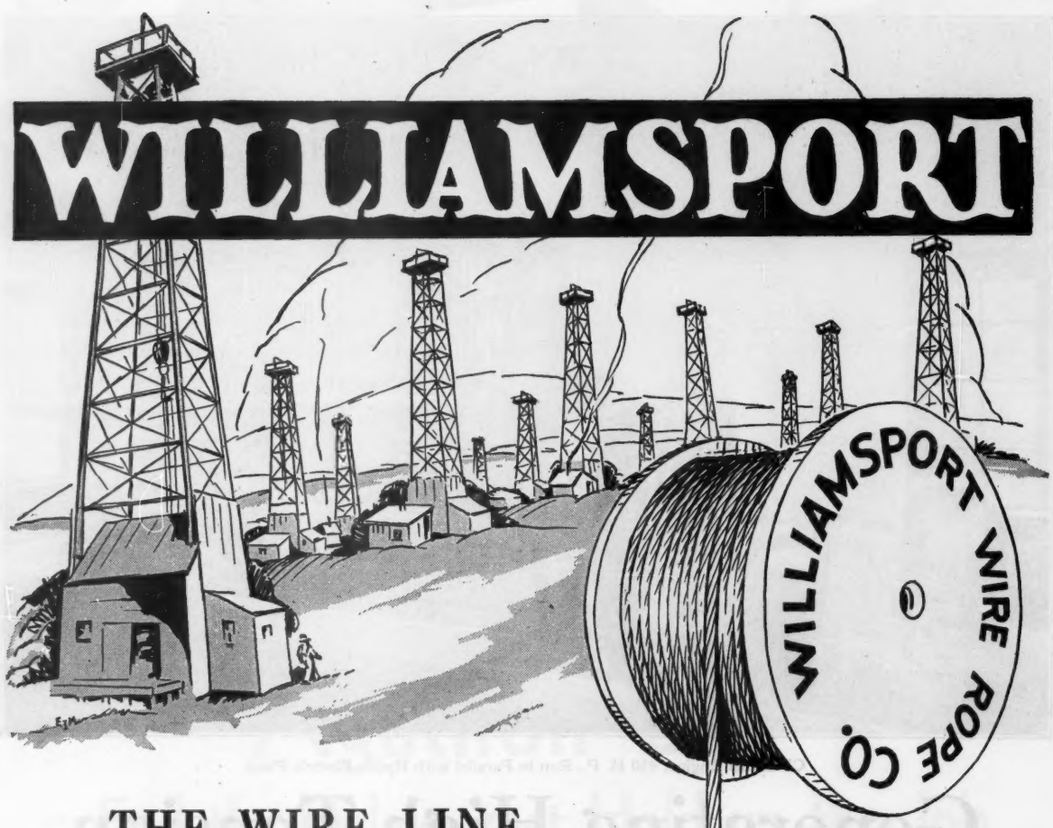
Chicago Pneumatic Tool Co.

Sales and Service Branches all over the World

6 East 44th Street New York, N. Y.

DIESEL ENGINES

M-19



THE WIRE LINE *GOOD* DRILLERS PREFER

Wherever you find a competent man—you'll generally find him using competent tools.

This is as true in the Oil Fields as anywhere else.

We honestly believe that a Williamsport line in the hands of a good driller will give long-enduring satisfaction and greatest economy.

Try it and prove this to your own satisfaction.

WILLIAMSPORT WIRE ROPE COMPANY

Main Office and Works: Williamsport, Pa.

General Sales Offices: 122 S. Michigan Ave., Chicago, Ill.

Oil Country Sales Offices: Williamsport Bldg., Fourth and Midland Valley Tracks, Tulsa, Okla.

The Largest Exclusive Wire Rope Plant in America

OUR OWN WAREHOUSES

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Shreveport Casper
Lewistown Electra Odessa
Seminole
Borger Pampa Wink
San Antonio

Distributed by the
Bridgeport Machine Company
Wichita Kansas
and all of their Mid-Continent Branches.

OH! YEAH?

What's That Picture Over There?

Say, where have you been? Don't you know what that is? That's a picture of the World-Famous Baker Drill Pipe Float.

Oh! Yeah? What's It For?

What's it for? Gee, can anybody be that—oh, well, I suppose I might as well tell yuh. It's a "joint"—no, no, not that kind of a joint—it is put into the drill string between tool joints, and that round thing in the middle of the picture is a special "Baker-Made" back-pressure valve.

Is It Any Good?

Huh? Is It Any Good? Well, for the lovapete, what kinda rigs have you been workin' on? I thought everybody knew about the Baker Drill Pipe Float —and USED it. Certainly it's good. So good, as a matter of fact, that you'll find it in use all over the world, wherever there is an oil field of any importance.

Well, Now Tell Me, What's It Do?

The name tells you that—it is a Drill Pipe Float. You make it up in the string, as far from the top as the collapsing strength of the drill pipe will permit. It's a safety device. If a joint breaks or the string twists off, this Baker Drill Pipe Float floats the string down safely, without damage, and the fishing job is a cinch.

O. K. Fella. Just In Case—Where Do I Buy 'Em?

Oh, you can get them in any good supply store, or they will order them for you. And if you want any more information, and I'm not around, just write the Baker people—they'll give you some fast service, boy—what I mean—FAST.

Detailed Information Will Be Mailed on Request

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BAKER OIL TOOLS, INC.
P. O. Box L, Huntington Park, Calif.
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220 E. Brady St., Tulsa, Okla.
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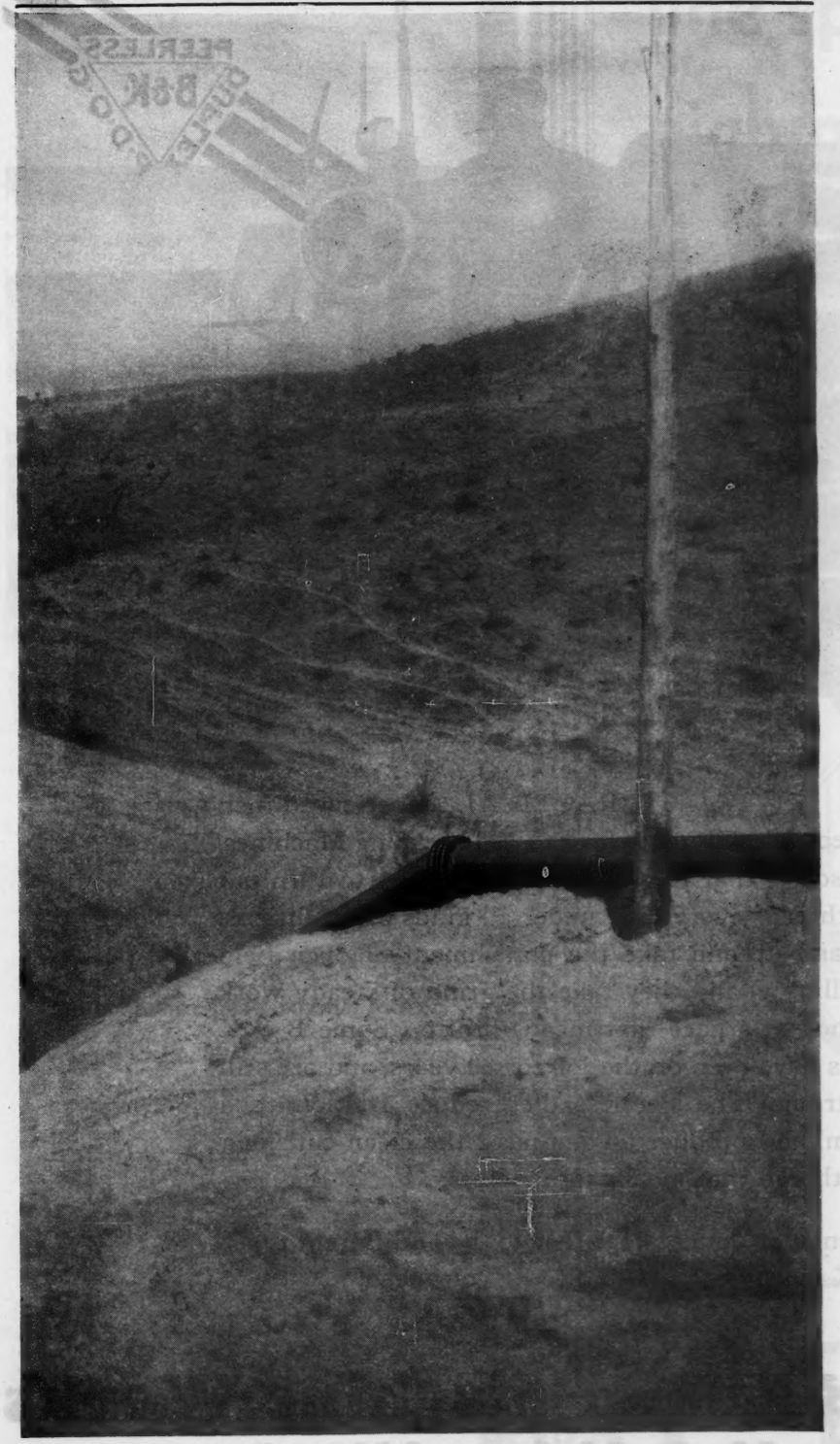
Don't Use Cast-Iron Equipment — Cement is Stronger and Better

Stocks carried by Dealers in all active Mid-Continent fields.

PIPE LAYER'S

SMITHWELDED

HEAVEN



(In the language of the pipe liner, any country that is especially easy to go through with a pipe line is known as "pipe layer's heaven.")

An old timer told us that with SMITH-Welded Line Pipe and SMITHWeld Bell and Spigot and Expansion Bending Joints, all kinds of country become "PIPE LAYER'S HEAVEN."

A. O. SMITH CORPORATION
OIL AND GAS FIELD PRODUCTS DIVISION
General Offices: Milwaukee, Wisconsin
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GAS LINE PIPE

Leakproof threads here every time!

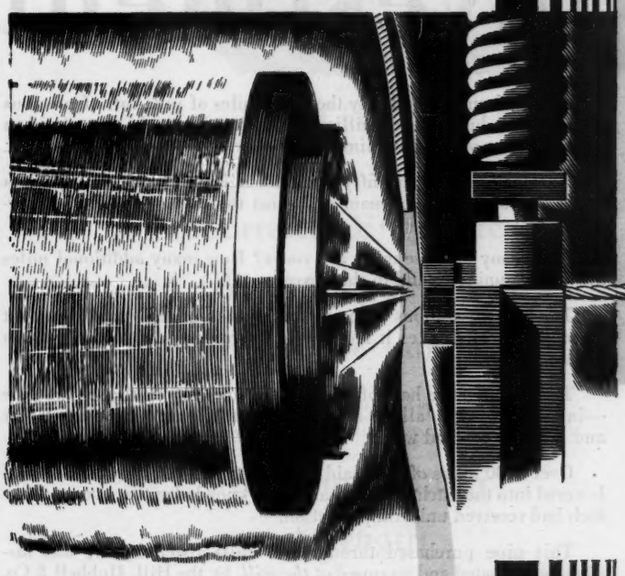
PRACTICAL, experienced men have a decided preference for B & K Threading Machines. The reason is that they can be relied upon to turn out perfect threads every time under all kinds of conditions. They stand up and take the punishment of open field work willingly, and they take the grind of steady work in the shop at a pace that means profits. Some B & K machines have been on the job for 20 years, and are still going strong. The Peerless dies reduce friction to a minimum, and produce at one pass, the clean-cut, long tapered thread that means tight joints.

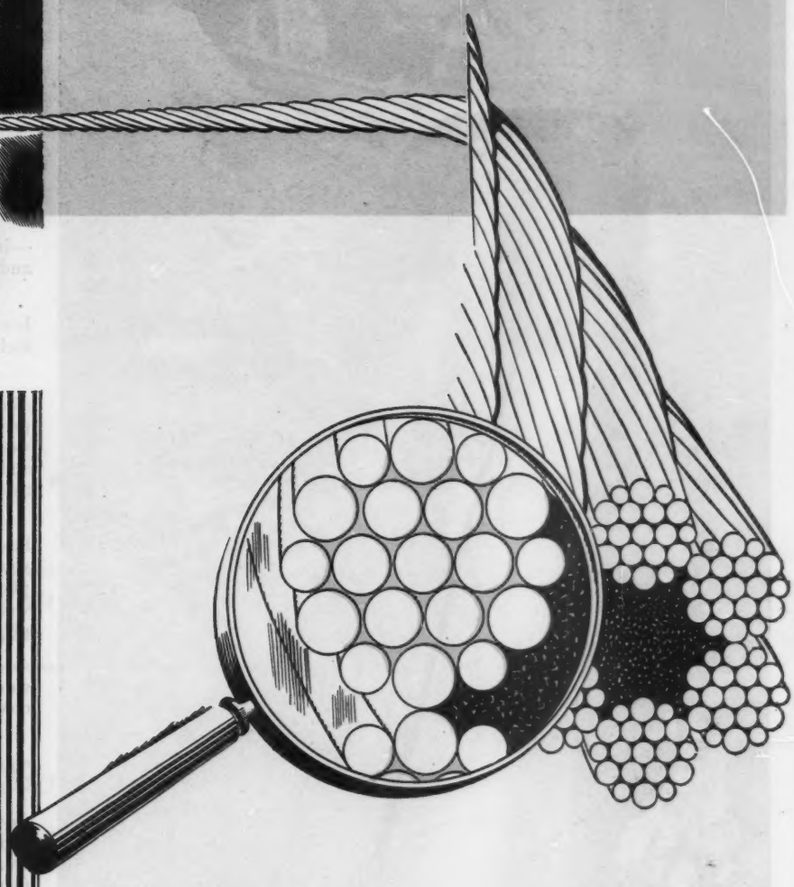
Let us send you our catalog. One of the 17 different types of B & K machines is certain to fit your need.

Bignall & Keeler Machine Works
of the N. O. Nelson Mfg. Co.
EDWARDSVILLE, ILLINOIS

OG&J 2-27-Gray

Every wire in the line sprayed with high grade petroleum grease

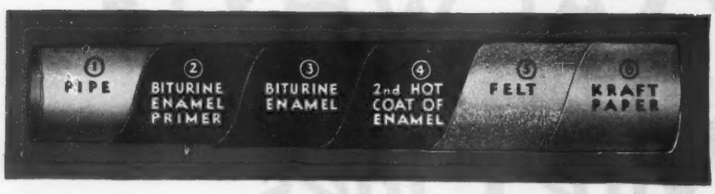




INTERNALLY LUBRICATED! The grease applied hot to the individual wires of the line during fabrication. Spun right into the strand where it remains to lubricate the wires and protect them against internal friction. Means longer life for the line—greater economy for the user. Macwhyte Company, Kenosha, Wisconsin.

MACWHYTE Wire Lines

It's good common sense to guard your pipe line investment



Hill, Hubbell & Company Machine Coated and Wrapped Pipe is Your Best Insurance Against Corrosion

. . . One hundred and fifty thousand miles of pipe full of precious oil or gas . . . hundreds of millions of dollars invested . . . waste when the line fails; of contents, time and money to recondition or replace.

. . . One hundred and fifty thousand miles of pipe—guarded in a good, bad or indifferent manner against the ravaging effects of corrosion.

How many of those miles are yours? How many additional miles are you planning to add to this investment?

The best precautions are none too good to guard your investment when the backfill takes it from your appraising eye, and it goes to work for you.

The best practice heretofore has been the hand coating of the pipe —in the field—with all the attendant difficulties of uncertain weather and labor to contend with.

Over 3000 miles of pipe laid during the past few months has been lowered into the ditch with the satisfying knowledge that every square inch had received uniform protection.

This pipe purchased through the mills listed below, was *mechanically* coated and wrapped *at the mill*, by the Hill, Hubbell & Co. process. It was delivered in the field ready for weld and backfill. It was bought, and is being purchased in increasing quantities by far sighted line operators who are anxious to gain maximum service from their new lines.

The Hill, Hubbell & Co. Machine Coating and Wrapping Process has been developed by the same group who for twenty-three years have specialized in protective coatings for metal. The location of their plants adjacent to six prominent pipe mills enables you virtually to write your own pipe life insurance policy at the time your order for pipe is placed.

We are prepared to wrap pipe up to 24-inch diameter, and to conform to any specifications as to the number of machine applied hot coatings and wrappings required.

Hill, Hubbell & Company Pipe Coating and Wrapping Plants are equipped to handle the production of the following mills:

CENTRAL TUBE COMPANY, Ambridge, Pa.; SPANG-CHALFANT & COMPANY, Ambridge, Pa.; YOUNGSTOWN SHEET & TUBE COMPANY, Indiana Harbor, Ind.; NATIONAL TUBE COMPANY, Lorain, Ohio; A. O. SMITH CORPORATION, Milwaukee, Wisc.; YOUNGSTOWN SHEET & TUBE COMPANY, Youngstown, Ohio.

BITURINE COATINGS

Biturine Enamel *Biturine Solution No. 5*
Biturine Enamel Primer *Biturine 70-30*
Biturine Coupling Mixture

This group represents the fruits of more than 20 years of careful research and practical experience. Biturine Enamel and Primer are particularly adapted to the Hill, Hubbell & Company process of mechanically applying protective coating to the pipe at the mill.

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CHICAGO NEW YORK TULSA HOUSTON DALLAS
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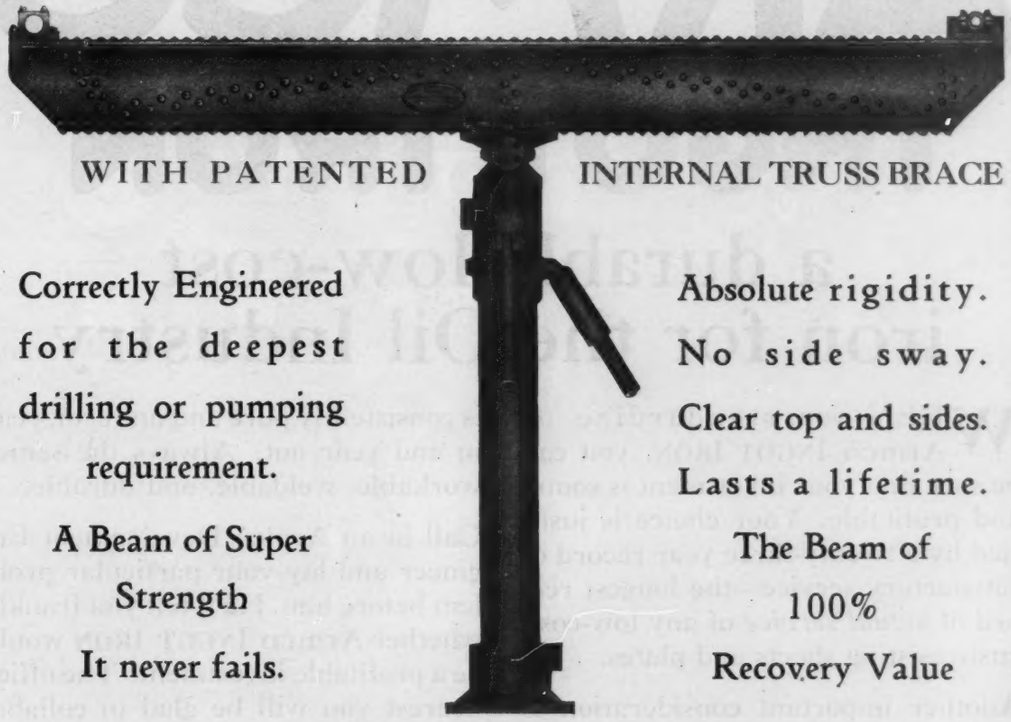
PORTLAND SEATTLE SPOKANE

DREADNAUGHT
•• STRUCTURAL STEEL ••
WALKING BEAMS



WITH PATENTED INTERNAL TRUSS BRACE

Correctly Engineered for the deepest drilling or pumping requirement.

A Beam of Super Strength

It never fails.

Absolute rigidity.

No side sway.

Clear top and sides.

Lasts a lifetime.

The Beam of 100% Recovery Value

BEAMS SOLD SEPARATELY OR WITH TUBULAR SAMPSON POST AND TUBULAR BRACES

Buy from your Dealer;

any Frick-Reid Store;

or direct

WE FAVOR THE STANDARDIZATION PROGRAM OF THE AMERICAN PETROLEUM INSTITUTE

BEAUMONT IRON WORKS COMPANY

MANUFACTURERS OF

DREADNAUGHT EQUIPMENT

Beaumont, Texas, U.S.A.

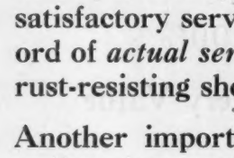
ARMCO
INGOT IRON

a durable low-cost iron for the Oil Industry

WHEN you standardize on Armco INGOT IRON, you can be sure that your investment is sound and profitable. Your choice is justified by a twenty-three year record of satisfactory service—the longest record of *actual service* of any low-cost, rust-resisting sheets and plates.

Another important consideration is uniformity. Armco INGOT IRON is consistently pure and uniform, year in and year out. Always the same: workable, weldable, and durable.

Call in an Armco Development Engineer and lay your particular problem before him. He'll tell you frankly whether Armco INGOT IRON would be a profitable investment. The office nearest you will be glad to collaborate, with no obligation to you.



Hear the famous
ARMCO CONCERT BAND
every Tuesday night
WLW-700K-Cincinnati
Ten to eleven E.S.T.

THE Bakhtiari Oil Company, Ahwaz, Persia used 12,000 feet of 30-inch riveted Armco INGOT IRON pipe in this pipe line. A wise choice: for pure iron will perform long with accompanying low cost per year service.

Back of this familiar symbol is nearly thirty years' experience in the manufacture of special analysis iron and steel sheets and plates. When you want a rust-resisting, low-cost metal be sure to see this triangle and the words, "Armco INGOT IRON." It is your assurance of economical service.

THE AMERICAN ROLLING MILL CO.
Executive Offices, Middletown, Ohio
Export: The ARMCO International Corporation

DISTRICT OFFICES: Chicago, Cincinnati, Cleveland, Detroit, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco

"BE SURE IT'S MADE OF ARMCO INGOT IRON"

Up-to-date Refining Plants

Maintain Close Process Control

The installation here pictured is fully equipped with Brown Instruments and controls a Jenkins Cracking plant recently erected by the Cosden Oil Co.

ONLY through accurate technical and instrument control can oil refineries operate at a profit under conditions imposed by the present day demand for petroleum products having definite characteristics held within close limits.

Temperatures, pressures, vacuums, flows, liquid levels, speeds, and other factors must be accurately governed.

With the increase in appreciation of the importance of dependable control the number of Brown Instrument equipments rapidly expands.

Brown Engineers—oil specialists—are ready at all times to cooperate with you. Write today for information or quotations. Or have a Brown Engineer call at your convenience.

THE BROWN INSTRUMENT COMPANY
4488 Wayne Ave., Philadelphia, Pa.
Branches in 20 principal cities

Brown Instruments

To Measure is to Economize

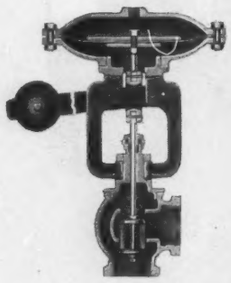
PUMP GOVERNOR

Positive — accurate — provides constant, uniform pump control. Monel or stainless steel trim for gasoline service.

No. 425

There's Sensitiveness, Accuracy, and Positive Control in McALEAR

Pressure and Level Controls



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Gasoline Trap
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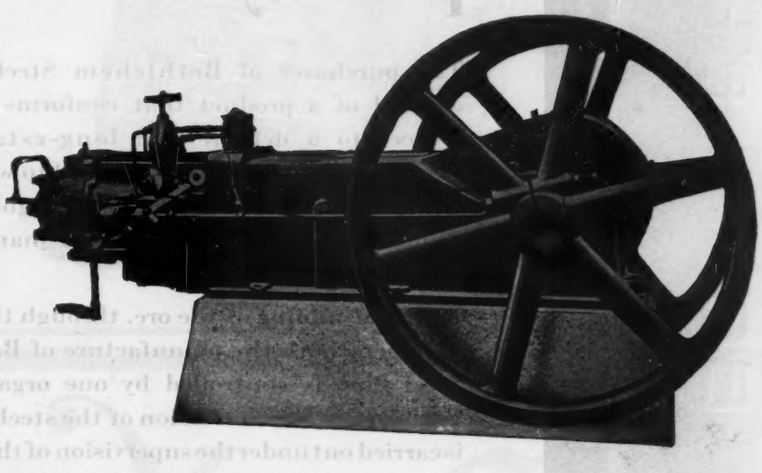

Our formula: The best of materials, plus machine shop practice of the best; add to this engineering that knows drilling stress and strain—engineering that incorporates into the OF patented features exclusive to the OF. And the net is an oil drilling engine that will pull at low speed—that has lightning-like acceleration—an engine that's a miser on fuel and lubricating oil. And there's surplus strength—obtained without cumbersome weight. All of which means top efficiency, long trouble-free life.

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The purchaser of Bethlehem Steel Pipe is assured of a product that conforms in every respect to a definite and long-established standard of quality—the standard to which this Company has been working throughout more than half a century devoted to the manufacture of steel and steel products.

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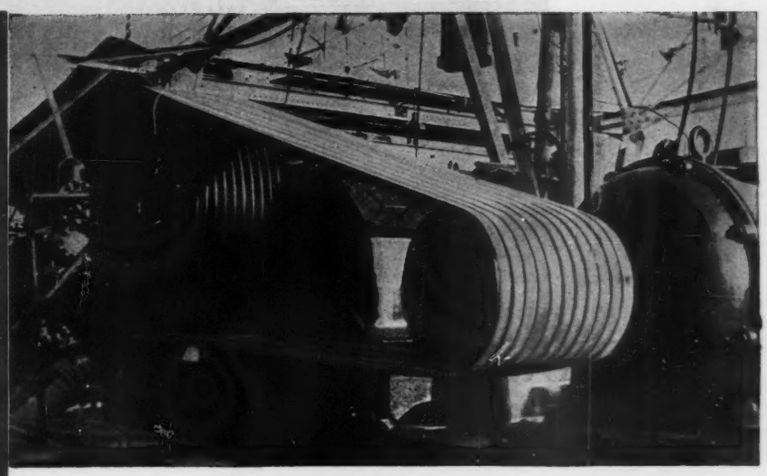

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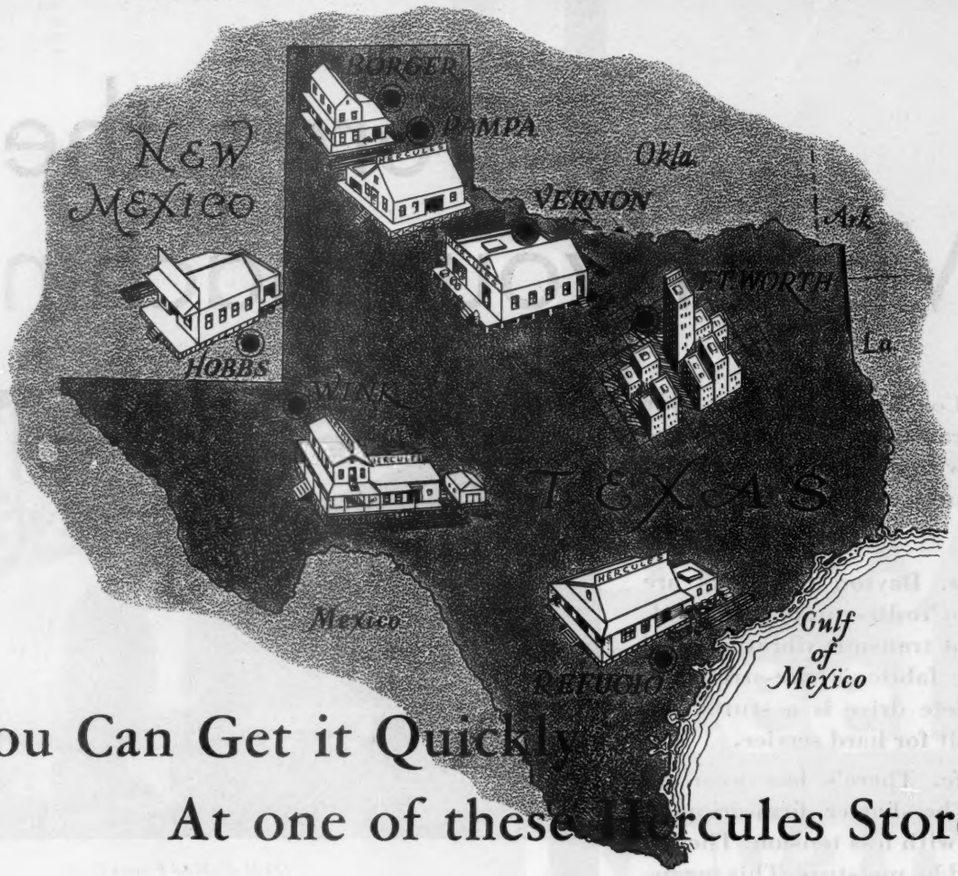

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Stores of the Hercules Supply Company are located in key positions throughout the whole of Texas. Borger and Pampa cover the entire Panhandle. Wink and Hobbs, N. M., reach the Hendricks and Lea County pools and other parts of West Texas. North Texas is covered by the store at Vernon and by the home office in Fort Worth. In that vast territory Southwest of Houston there is the Hercules Store at Refugio.

In the compact Hercules organization service is given quickly and like the oil man wants it—without a bundle of red tape. Personal interest and personal service follow every order through to its promised delivery.

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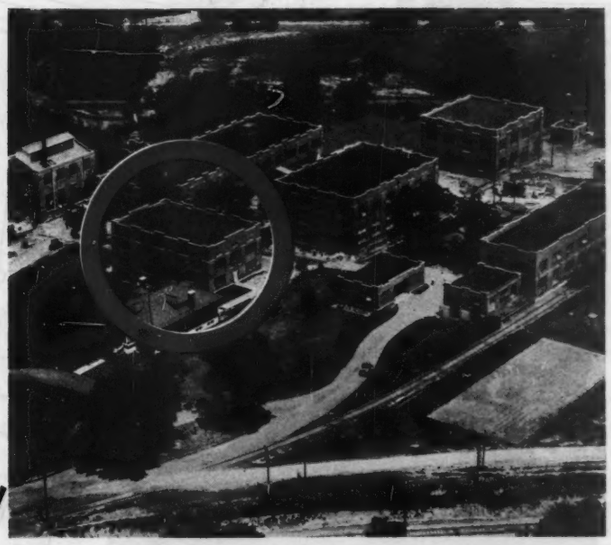

THIS Laboratory grew from a real necessity of the Petroleum Industry ✣

The laboratory indicated by the circle on the above view of the Tret-O-litE plant wasn't built just for fun. Wm. S. Barnickel & Company spent the money necessary to erect and equip this laboratory, and to man it with expert research chemists, because such facilities were absolutely essential to handling the cut oil problems of the petroleum industry.

As manufacturers of Tret-O-litE · · the first, the most extensively used, the most thorough and the most economical method of treating cut oil · · we have recognized that it is our duty to know all that can be known about cut oil.

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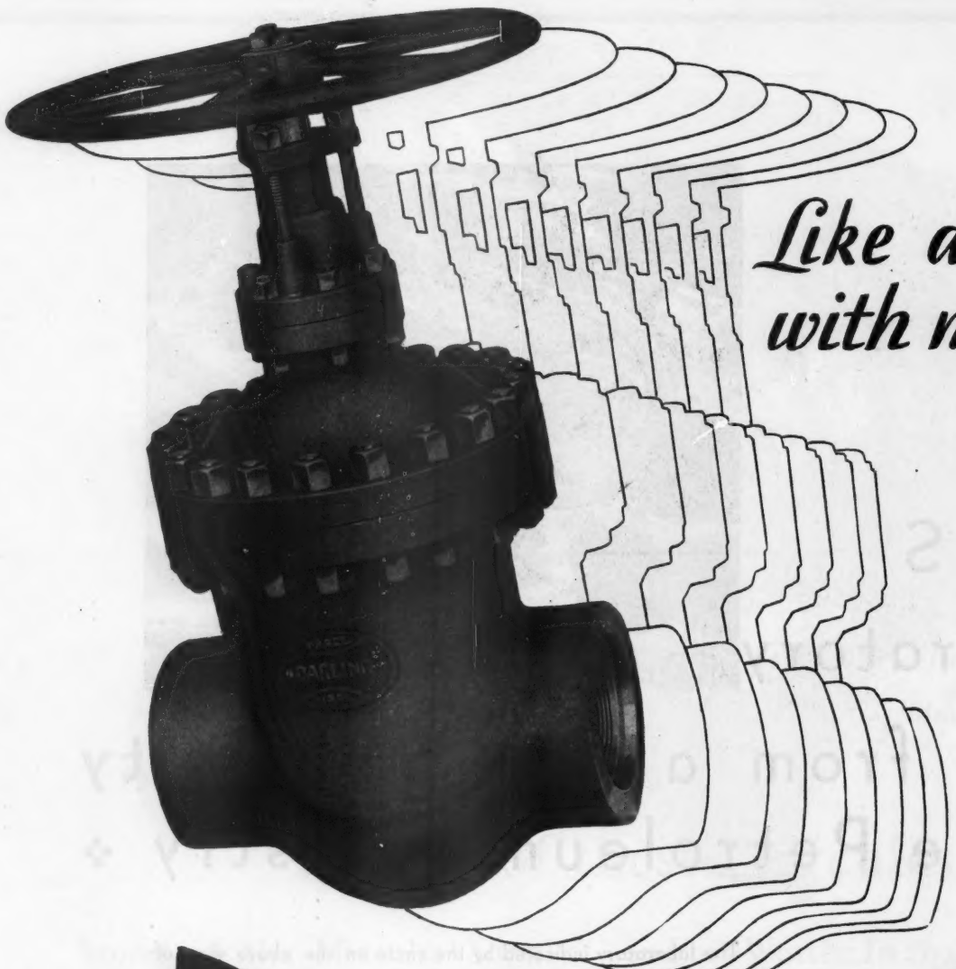

Like a cat with nine lives

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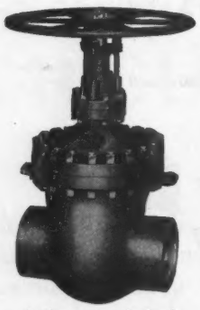
GATE VALVES

When the Darling Valve is made—it is made skillfully and with the most flawless material—which means just this to you—you get a valve that will outlive your most optimistic expectations, a big saving in valve cost, in repair cost, and in production time.



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700

Clarksburg, West Virginia, Area

In the fall of 1859, C. H. Shattuck drilled the first test made for oil in West Virginia, being located on the bank of the Hughes River, Wirt County, and was drilled by the tedious spring pole process to a depth of 100 feet, only to find a dry hole. A greasy fluid was frequently skimmed from this river by the natives and used for rheumatism and bruises.

About the same time a salt well at Burning Springs, Wirt County, was flooded by a "Disagreeable Fluid", and its owner gave it up in disgust. However, in 1860 General Samuel Karns, of Pennsylvania, and his nephew, rigged this well up and pumped considerable oil from it.

In 1861-2 Ford & Hanlon bored a well on Oil Spring Run, Ritchie County, finding heavy oil in paying quantities from a depth of 1485 feet.

The year of 1863 witnessed completion of the first test at Volcano, Wood County, drilled by W. H. Moore, to a depth of 378 feet, which produced some 8000 barrels of oil before being abandoned. The second well drilled in this pool pumped 7000 barrels of oil in six months.

The first deep test in West Virginia was drilled by Charles B. Travernier, on Rock Run, Pleasants County. This was in the spring of 1883 and production was found at a depth of 2100 feet. This well produced for a period of eleven years.

Many other pools of interest have since been discovered in West Virginia. Gushers of note having been found in Tyler, Wood, Ritchie, Marion, Doddridge, Harrisson, Lewis and Gilmer Counties which surround Clarksburg.

In the vicinity of Clarksburg, oil is found at depths varying from 165 feet at Walkersville, to 3100 feet at Wallace.

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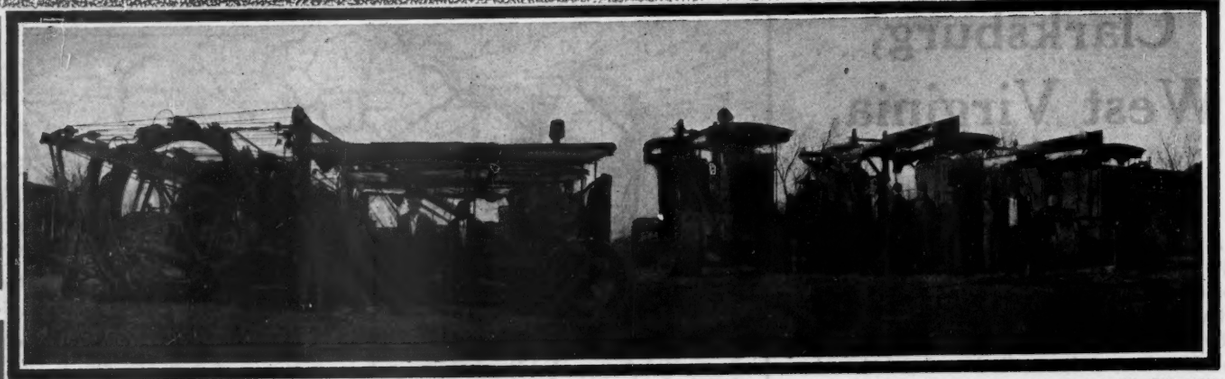

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THE BACKBONE OF AN ARMY

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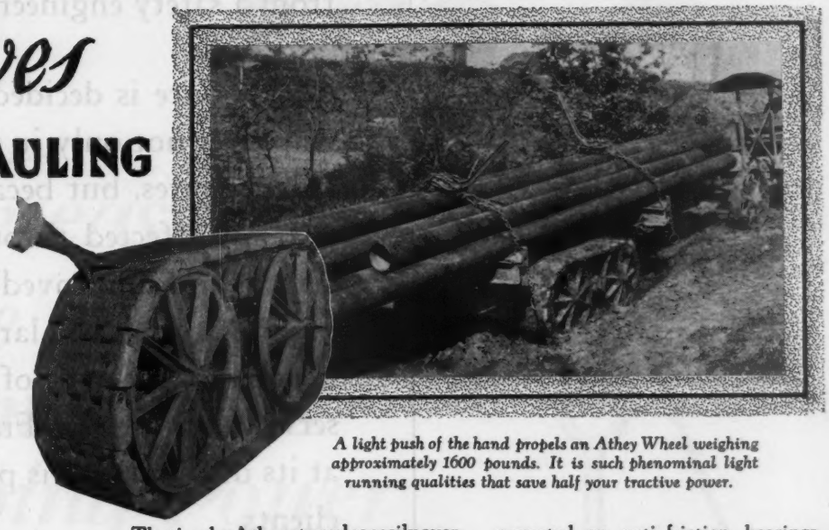
Such strength assures completion of the most difficult of jobs, during extreme weather, on time.

Why should you worry as to the completion of your pipeline being on time and in perfect condition? Let this reliable concern assume the responsibility. Their strength, and reserve equipment, is your protection.

The TRUMAN-SMITH CONST. Co.

EL DORADO, KANSAS.

WHY ATHEY CONSTRUCTION *Solves* HEAVY HAULING



A light push of the hand propels an Athey Wheel weighing approximately 1600 pounds. It is such phenominal light running qualities that save half your tractive power.

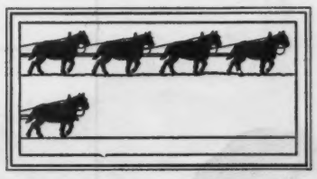
ATHEYS owe their remarkable ability to haul heavy loads under all operating conditions, to the unmatched construction and sound engineering principles that are available only in Athey Truss Wheels.

Atheys are non-miring. They travel wherever a man can walk or a tractor operate. The two pair of load carrying wheels always travel on a rigid, steel track—an unending highway of steel—regardless of actual road conditions. This broad track band gives a road contact or supporting area of 9 to 12 square feet, depending on capacity of wheel, distributing the weight over this larger surface instead of concentrating it on small surfaces as does ordinary round wheel equipment.

Any wheel goes over an obstruction in proportion to relative sizes. The larger the wheel, the less pull is required. The Athey TrussTrack gives an Athey Wheel the mechanical advantage equivalent to a wheel of great size. The track acts as an inclined plane which gradually raises the load up and over the ground obstruction *with little or no effort.*

That is why Atheys travel so easily over uneven, soft or sandy ground where ordinary equipment cannot operate.

The Collins Tester proves that ONE horse can pull as much on a hard surfaced road as FOUR horses can on a dirt road. ATHEYS PROVIDE THEIR OWN HARD-SURFACED ROADS because the load carrying wheels always travel on the broad track band—always on a solid surface. Atheys bridge the soft spots—carry their loads on top of the mud, not through it.



The light-running qualities of Atheys are due to Track Wheels, mounted on anti-friction bearings, rolling on a rigid steel track. This almost frictionless type of tracklaying wheel makes possible the carrying of extremely heavy loads with remarkable saving in tractive power.

These Athey Truss Wheel advantages are all incorporated in the Athey All-Steel Wagon, a general utility wagon, used with tractors for transporting all types of heavy equipment under all road conditions. It is the modern, economical means for hauling heavy loads.... Write for complete information.

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ATHEY TRUSS WHEEL WAGON

IT BRIDGES THE SOFT SPOTS

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This service is decidedly valuable to the employer not only in its influence on insurance rates, but because of the savings that are effected through increased efficiency and improved productivity. No organization is too large nor too small to benefit by the type of safety engineering service which The Frates Company has at its disposal and is prepared to offer its clients.

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Many of the leading oil companies, foreseeing the economies and advantages in the all structural steel program have standardized on IDECO Derricks and Rig equipment.

Smaller operators who may be looking forward to the time when they may advantageously dispose of their holdings, will find their property more saleable if their wells are IDECO equipt.

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709

The ADVERTISERS' INDEX

A

Acme Fishing Tool Co.
Air Preheater Corp., The
Ajax Iron Works
Ajax Rope Co.
Alco Oil Tool Co.
Allegheny Steel Co.
Allen Air-Turbine Ventilator Co.
Allis-Chalmers Mfg. Co.
Aluminum Co. of America
American Askania Corp. 165
American Asphalt Paint Co.
American Cable Co., Inc.
American Car & Foundry Co.
American Cast Iron Pipe Co.
American Fomon Co.
American Iron & Machine Works Co.
American La France & Foamite Corp.
American Meter Co.
American Radiator Co.
American Rolling Mill Co. 16
American Schaeffer & Budenburg Corp. 121
American Sheet & Tin Plate Co.
American Steel & Wire Co. 21
American Steel Works
American Telephone & Telegraph Co.
American Well Works 178
Anchor Post Fence Co.
Andrews Steel Co., The 174
Armstrong Brothers Tool Co. 181
Armstrong Machine Works
Athey Truss Wheel Co. 29
Axelson Mfg. Co., Ltd. 93
Ayer & Lord Tie Co. 181

B

Baash-Ross Tool Co.
Babcock & Wilcox Tube Co., The
Badger, E. B., & Sons Co.
Baker Oil Tools, Inc. 9
Baldwin Chain & Mfg. Co.
Barber-Greene Co.
Barco Mfg. Co.
Barnickel, Wm. S., & Co. 25
Barnsdall Refineries, Inc.
Barrett Co., The
Bartlett-Hayward Co., The
Beaumont Iron Works, The 15
Bell Oil & Gas Co.
Bessemer Engine Co. 96-97
Bethlehem Steel Co. 20
Big Lake Oil Co.
Bignall & Keeler Machine Works 12
Birmingham Tank Co. 178
Blackor Co. 105
Black, Sivalls & Bryson, Inc. 85
Black Wire Rope Co.
Bosch, Robert, Magneto, Inc.
Braden Steel Corp.
Braun, C. F., & Co.
Brewster Co., The, Inc.
Bridgeport Machine Co. 98
Bristol Co., The
Broderick & Bascom Rope Co.
Brown, Arthur C. 182
Brown Instrument Co. 17
Brown-Strauss Corp. 135
Buckeye Traction Ditcher Co.
Buffalo Gasolene Motor Co. 127
Burford Oil Co.
Burt Mfg. Co.
Butler Mfg. Co. 183
Byron Jackson Co. 81

C

California Manufacturing & Engineering Co.
Cameron Tool & Supply Co.
Carey, The Philip, Co.
Caterpillar Tractor Co.
Central Alloy Steel Corp. 6
Chain Belt Co.
Champion Machine & Forging Co., The
Chaplin-Fulton Mfg. Co., The 173
Chapman Valve Mfg. Co., The Inside Front Cover
Chicago Bridge & Iron Works 117
Chicago Pneumatic Tool Co. 7
Clark Brothers Back Cover
Classified Wants 140-141-142
Cleveland Trencher Co., The
Climax Engineering Co.
Colona Mfg. Co.
Columbian Rope Co. 170
Columbus Forge & Iron Co., The 178
Consolidated Ashcroft Hancock Co., Inc. 121
Continental Supply Co., The 95
Cooke, C. Lee, Mfg. Co.
Cooper-Bessemer Corp., The 96-97
Cooper, C. & G. Co., The 96-97
Crane Co.
Crane Packing Co.

D

D. & B. Pump & Supply Co.
Darling Valve & Mfg. Co. 26
Dart, E. M., Mfg. Co.
Davis, G. M., Regulator Co.
Dayton Rubber Mfg. Co., The 23
Dearborn Chemical Co. 169
Detroit Aircraft Corp.
Detroit Graphite Co.
Dixon Crucible Co., Joseph 167
Dodge Brothers Corp.
Doheny Stone Drill Co.
Donner Engineering Co.
Donovan Boiler Works, Inc.
Dow Chemical Co., The 172
Dresser & Gorton, Inc.
Dresser, S. R., Mfg. Co. 45
Driftmeter, Inc.
Du Pont de Nemours & Co., Inc., E. I.
Durametallic Corp.

E

Eagle-Picher Lead Co.
Economy Pump & Oil Tool Co., The
Edelblute Co., T. H.
Edward Valve & Manufacturing Co., The
Electric Machinery Mfg. Co.
Elliott Core Drilling Co.
Empire Oil & Refining Co.
Emsco Derrick & Equipment Co.
Enduro Nirosta Steel Co.
Ethyl Gasoline Corp.
Exchange Banks of Tulsa 58

F

Fenwick-Reddaway Mfg. Co. 182
First National Bank & Trust Co., The
Fisher Governor Co.
Fisk Tire Co., The
Fluor Construction Co.
Fort Worth Steel & Machinery Co.
Fort Worth Well Machinery & Supply Co., Inc.
Foster-Wheeler Corp. 3
Four-Wheel Drive Auto Co., The
Foxboro Co., Inc., The 33
Franklin Valveless Engine Co. 19
Frates Co., The 30
Frick-Reid Supply Corp. 27
Fulton Iron Works Co.

G

G. & M. Co., Inc.
Gardner-Denver Co. 133
Garlock Packing Co.
Gaso Pump & Burner Mfg. Co. Inside Back Cover
General Electric Co.
General Paint Corp. 14
Gilbert & Barker Mfg. Co.
Goble, B. G.
Goodrich, B. F., Rubber Co., The
Goodyear Tire & Rubber Co. 99
Goslin Birmingham Mfg. Co., Inc.
Gott, H. P., Mfg. Co., Inc.
Goulds Pumps, Inc.
Granite City Steel Co.
Grant Oil Tool Co.
Graver Corp.
Gray Processes Corp., The 123
Greenspon's Joseph, Sons, Iron & Steel Co.
Griscom-Russell Co. 147
Guiberson Corp. 31
Gulf Refining Co. 180

H

Halliburton Oil Well Cementing Co. 4
Hanlon-Waters, Inc. 136
Harrisburg Pipe & Pipe Bending Co. 72
Haynes Stellite Co. 102
Hazard Wire Rope Co. 104
Heeter, Sons & Co., Inc., C. A.
Hercules Motors Corp.
Hercules Supply Co. 24
Hercules Tool Co.
Heydrick Mapping Co. 182
Hill, Hubbell & Co. 14
Hills-McCanna Co.
Hinderliter Tool Co.
Hough, Charles N., Mfg. Co.
Hughes Tool Co. 191
Humble Oil & Refining Co. 135
Hussmann Hotel
Hyatt Roller Bearing Co. 71

I

Imperial Belting Co. 109
Imperial Refineries
Imperial Royalties Co.
Independent Oil & Gas Co.
Ingersoll-Rand Co.
International Cement Corp.
International Composition Co., Inc.
International Creosoting & Construction Co.
International Derrick & Equipment Co., The 32
International Harvester Co. of America 5
International Nickel Co., Inc., The
International Supply Co.

J

Jackson Co., Byron 81
Jackson Engineering Corp.
Jarecki Mfg. Co.
Jefferson Union Co.
Jenkins Brothers
Johns-Manville Corp.
Jones & Laughlin Steel Corp.
Jones, The S. M., Co.

K

Kellogg, M. W., Co., The 181
Kelly, John Eoghan
Kennedye-Plumb Corp.
Kennedy Valve Mfg. Co., The 165
Kerotest Mfg. Co.
Key Boiler Equipment Co.
Kingham Trailer Co., Inc.
Kirk-Morrow Iron Works, The 55
Kohler Co.
Koppers Co., The
K-W Ignition Corp., The 128

L

Landis Machine Co.
Larkin & Co.
Layne & Bowler Co.
Leader Iron Works 167
Lees-Bradner Co.
Leschen, A., & Sons, Rope Co.
Leonard Construction Co.
Lincoln Electric Co.
Linde Air Products Co.
Link Belt Co. 69
Lone Star Gas Co.
Longyear, E. J., Co.
Lorraine Corp., The 111
Lucey Products Corp.
Ludlow Valve Mfg. Co.
Ludlum Steel Co.
Lufkin Foundry & Machine Co., The
Lufkin Rule Co.
Lummus, The Walter E., Co.
Lunkenheimer Co.

Mc

McAlear Mfg. Co., The 18
McCord Radiator & Mfg. Co.
McEverlast, Inc.
McEvoy, J. H., & Co.
McGregor Working Barrel Co.
McIntosh & Seymour Corp.
McKee, Arthur G., & Co. 112

M

MacClatchie Mfg. Co.
Macwhyte Co. 13
Madison-Kipp Corp.
Magnolia Petroleum Co.
Maloney Tank Mfg. Co. 87
Manzel Brothers Co.
Marion Machine Foundry & Supply Co.
Marley Co., The
Marsh Gauge Pole Co.
Martin-Decker Corp.
Mason Regulator Co.
Melcher, A. F. 181
Merco Nordstrom Valve Co.
Metric Metal Works
Midwest Piping & Supply Co., Inc.
Miller Combination Bailer & Pump Co. 107
Miller Improved Gas Engine Co.
Mine Safety Appliance Co.
Missouri Portland Cement Co. 168
Moon Mfg. Co., The
Moore, Lee C., & Co., Inc. 67
Muller Co., The John 134
Munn & Co. 181
Muskogee Iron Works
Myers, F. E., & Bro. Co. 181

N

National Lead Co. 75
National Petroleum Engineering Co. 182
National Supply Co. 91
National Tank Co.
National Tool & Metals, Inc.
National Transit Pump & Machine Co. 49
National Tube Co.
Natural Gas Equipment Co.
Naylor Pipe Co. 110
Neilan, Schumacher & Co.
Nitrose Co., The
Norris Bros., Inc.
North American Car Corp. 142
Northern Pump Co.
Novo Engine Co.
Nye Tool & Machine Works

O

Oakite Products Co. 98
O'Brien Steel Construction Co.
Ohio Injector Co., The
Oil Conservation Engineering Co., The
Oil Countries Specialties Mfg. Co., The 124
Oil Insurance Assn.
Oil Well Improvements Co.
Oil Well Supply Co. 69
Oklahoma Gas & Electric Co.
Oklahoma Portland Cement Co.
Oxweld Acetylene Co.

P

Page & Hill Co. 171
Panyity, L. S.
Parkersburg Machine Co. 178
Parkersburg Rig & Reel Co. 86
Parmenter & Selby
Parsons Co., The
Patrick, R. S.
Patterson-Ballagh Corp. Front Cover
Pattin Bros. Co.
Penberthy Injector Co. 47
Petroleum Engineering Corp.
Petroleum Engineering Univ.
Petroleum Equipment Co.
Petroleum Iron Works Co. 166
Pforzheimer, Carl H., & Co.
Phillips Petroleum Co.
Pittsburgh Equitable Meter Co.
Pittsburgh Screw & Bolt Corp.
Pittsburgh Steel Products Co.
Pittsburgh Valve, Foundry & Construction Co. 52
Podbielniak, W. J.
Pomona Pump Co. 164
Powell, William, Co.
Power Piping Co.
Prescott Co., The 61
Pressed Steel Car Co.
Prest-O-Lite Co., Inc., The
Protective Metals, Inc.
Public Service Co.
Pure Oil Co. 163
Pyle National Co.
Raigorodsky, P. M.

R

Reading Iron Co.
Reading Steel Casting Co., Inc.
Reece Wooden Sole Shoe Co., Inc.
Reed Roller Bit Co.
Regan Forge & Engineering Co. 22
Reid, Joseph, Gas Engine Co.
Republic Iron & Steel Co. 161
Republic Supply Co.
Robinson Orifice Fittings Co.
Ross-Meehan Foundries Co. 182
Russell Mfg. Co., The
Ryan Aircraft Co.
Ryerson, Joseph T., & Sons, The 178

S

Safety Gas Main Stopper Co. 182
St. Louis Surfacer & Paint Co.
Schramm, Inc. 104
Selden Co., The
Shaffer Oil & Refining Co.
Shaffer Tool Works
Shaw, S. F. 182
Sheldon Machinery Corp.
Shell Petroleum Corp.
Sherwin-Williams Co.
Shippers' Car Line Corp.
Sinclair Refining Co. 151
Sivyer Steel Casting Co.
Skelly Oil Co.
Smith, A. O., Corp. 10-11
Smith Engineering Co.
Smith Co., E. M.
Smith, H. C., Mfg. Co., Inc. 89
Smooth-On Mfg. Co.
South Chester Tube Co.
Southern Cornice Works
Southwestern Engineering Corp. 43
Southwest Welding & Mfg. Co.
Spang & Co. 175
Spang, Chalfant & Co., Inc.
Spengler Tool Co. 2
Springfield Wagon & Trailer Co.
Standard Power Equipment Corp.
Standard Steel Works
Star Drilling Machine Co.
Starrett Co., The L. S.
Steiner, George
Stockham Pipe & Fittings Co.
Stoody Co.
Stork Engineering Co. 126
Strom Steel Ball Co.
Strong, Carlisle & Hammond Co., The
Strong Oil Tool Co. 57
Struthers-Wells Co.
Sullivan Co., The 159
Sullivan Machinery Co. 134
Sun Shipbuilding & Drydock Co.
Sureshot Torpedo Co.
Swartwout Co., The
Swedish American Prospecting Corp.

T

Taylor Instrument Companies 125
Templeton, Kenly & Co., Ltd.
Terry Steam Turbine Co., The
Texas Creosoting Co.
Texas Power & Light Co.
Thermoid Rubber Co.
Timken Roller Bearing Co. 65
Titusville Forge Co. 122
Titusville Iron Works Co., The
Toledo Pipe Threading Machine Co., The 103
Trackson Co. 77
Trimont Mfg. Co.
Tristate Royalty Corp. 177
Truman-Smith Construction Co. 28
Tube Turns, Inc.
Tulsa Boiler & Machinery Co.
Tulsa Chamber of Commerce
Tulsa Sheet Metal Co. 181
Twin Disc Clutch Co.

U

Union Carbide & Carbon Corp.
Union Mfg. Co.
Union Wire Rope Co.
Universal Engineering Co.
Universal Oil Products Co. 51

V

Vallez Rotary Filter Co.
Vex Co., The
Victaulic Co. of America 63
Victor Balata & Textile Belting Co.
Victor Welding Equipment Co.
Vogt, Henry, Machine Co.

W

Wagner Electric Corp.
Wailes, Dove-Hermiston Corp.
Wall Rope Works, Inc. 103
Walworth Co. 1
Warren Petroleum Co.
Washburne, Chester W. 182
Waukesha Motor Co.
Westco.t Valve Co.
Western Gas Construction Co., The 179
Westinghouse Electric & Mfg. Co., The
West Texas Utilities Co.
White Co., The
Wickwire Spencer Steel Co.
Wico Electric Co.
Wiemann-Kammerer-Wright, Inc.
Wilgus Mfg. Co., The
Williamette Ersted Co.
Williamsport Wire Rope Co. 3
Williams Tool Corp.
Wilson-Snyder Mfg. Corp.
Wilson Welder & Metal Co., The
Winkler-Koch Engineering Co., The
W-K-M Co., The
Wood Shovel & Tool Co., The
Worthington Pump & Machinery Corp.
Wrigh. Mfg. Co.
Wyatt Metal & Boiler Works

Y

Yale & Towne Mfg. Co. 176

Z

Zero Hour Torpedo Co., The
Zwetsch, Heinzelmann & Co.

The Oil and Gas Journal

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TABLE OF CONTENTS

SPECIAL ARTICLES

California Adjustment Expected Soon 35
By Andrew M. Rowley
Failure of effort at voluntary curtailment undoubtedly will be followed by drastic crude price reduction.

Gasoline Distribution by Waterways 37
By A. E. Mockler
Will accompany major development of pipe line transportation in the East.

Crisis Continues in California 37
By L. P. Stockman
Considerable progress made in securing ratification of reduction in output.

Unit Operation Reports Summarized 38-39
By Earl Oliver and J. B. Umpleby
Results of study by group named by Petroleum Section, A.I.M.E.

Oil Questions at A.I.M.E. Meeting 38
By A. E. Mockler
Petroleum section endorses unit operation and self-control by industry.

New Orleans Program for Geologists 40
More technical papers to be presented than at any previous meeting.

Senators Considering Tariff on Oil 40
By Charles E. Kern
Sentiment seems to favor maintenance on free list.

Magnetogram Service Is Inaugurated 41
By L. G. E. Bignell
Reports of magnetic storms as they occur to be published.

Bradford-Allegany's Great Future 42
By Paul D. Torrey
Estimated that flooding will recover 600,000,000 bbls. in next 50 years.

Sidelights in Recent Cuts in Crude Price 42
By James McIntyre

Good Year, or Bad? (Editorial) 44

Field Problems and Their Solution 70
Edited by Thomas F. Smiley

Pipe Line Construction News 76

Oklahoma Gross Production, Fourth Quarter, 1929 82

Nationalization in Argentine 90
By John H. Nelson

Program for Los Angeles Show 144

Status and Importance of Isostasy 164
By William Bowie

FIELD OPERATIONS

Late Fields 48

Oklahoma 50
By W. A. Spinney

Kansas 53
By W. A. Spinney

North Louisiana-Arkansas 54
By D. H. Bancroft

Gulf Coast 56
By Neil Williams

Southwest Texas 59
By B. D. Stevenson

Rocky Mountain Area 60
By Tolbert R. Ingram

Canada 60
By Victor Lauriston

California 62
By L. P. Stockman

Central West 66
By Whit

Kentucky-Tennessee 66
By Whit

Eastern Fields 68
By D. S. Wakenight

West Texas 73-174
By L. E. Bredberg

North Texas and Panhandle 74-174
By L. E. Bredberg

Michigan 138
By Special Correspondent

East Central Texas 158
By L. E. Bredberg

REFINING AND MARKETING

Better Gasoline and Kerosene Demand 36
By C. O. Willson
Domestic buying improves in Oklahoma. Exporters place high gravity orders for March.

Technical Questions Answered 84
By Dr. C. K. Francis

Inquiries for Gasoline in Chicago Area 142
By J. B. Waldo

Unsettled Situation Weakens Market 143
By A. E. Mockler

Natural Gasoline Manufacture 145

Brief Items for Petroleum Refiners 146

Refinery and Crude Prices 148-149

Tank Wagon Quotations 150

Of Interest to Sales Departments 162

ARTICLES OF GENERAL INTEREST

The Advertisers' Index 35

Natural Gas Developments 82

Equipment and Supplies 88-92

Men Known in Oildom and Personals 100

Classified Want Advertisements 140-141-142

Oil Securities Market 152-153

Detailed Field Operations in January 185

Crude Petroleum Statistics 192

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Refinery Section Starts on Page 142

California Adjustment Expected Soon

Highest daily average estimated total production in 1929, week ended Aug. 24, 2,975,435 bbls. Lowest in 1929, Dec. 27, 2,595,320 bbls.

Failure of Effort at Voluntary Curtailment Undoubtedly Will Be Followed by Drastic Crude Oil Price Reduction

Highest daily average estimated light oil production in 1929, week ended Sept. 14, 2,534,524 bbls. Lowest in 1929, Apr. 13, 2,142,036 bbls.

By Andrew M. Rowley

Definite action may be expected within the very near future regarding the overproduction situation in California. Either crude oil output and refinery runs will be curtailed voluntarily by operators and refiners who realize such action is necessary to save the situation or much the same result probably will be obtained, if co-operation fails, through a drastic reduction in the crude oil price structure. Whatever course is taken will react to the benefit of the industry at large. Uncertainty as to what may be expected from California undoubtedly has been one of the greatest menaces in the present situation.

California operators are making an intensive and, what many consider possibly a final, effort to hold crude oil production down to market requirements. Some success already has attended this movement and crude oil output in California during this week will show a substantial decline from the average for the past week. California refiners who realize the seriousness of conditions will curtail runs to stills and endeavor to prevent a further piling up of gasoline stocks—a condition which can mean but one thing this summer, low prices and no profits.

Excessive gasoline stocks at this period of the year present the greatest obstacle to restoration of prices both for crude and refined oils which will permit operators and refiners to show a profit during 1930. Present stocks of gasoline must be reduced materially and quickly. All branches of the industry then may expect returns more in line with operating costs and good business. The larger refiners can insure better times simply by curtailing refinery runs and drawing upon their large stocks of gasoline to help supply current demand.

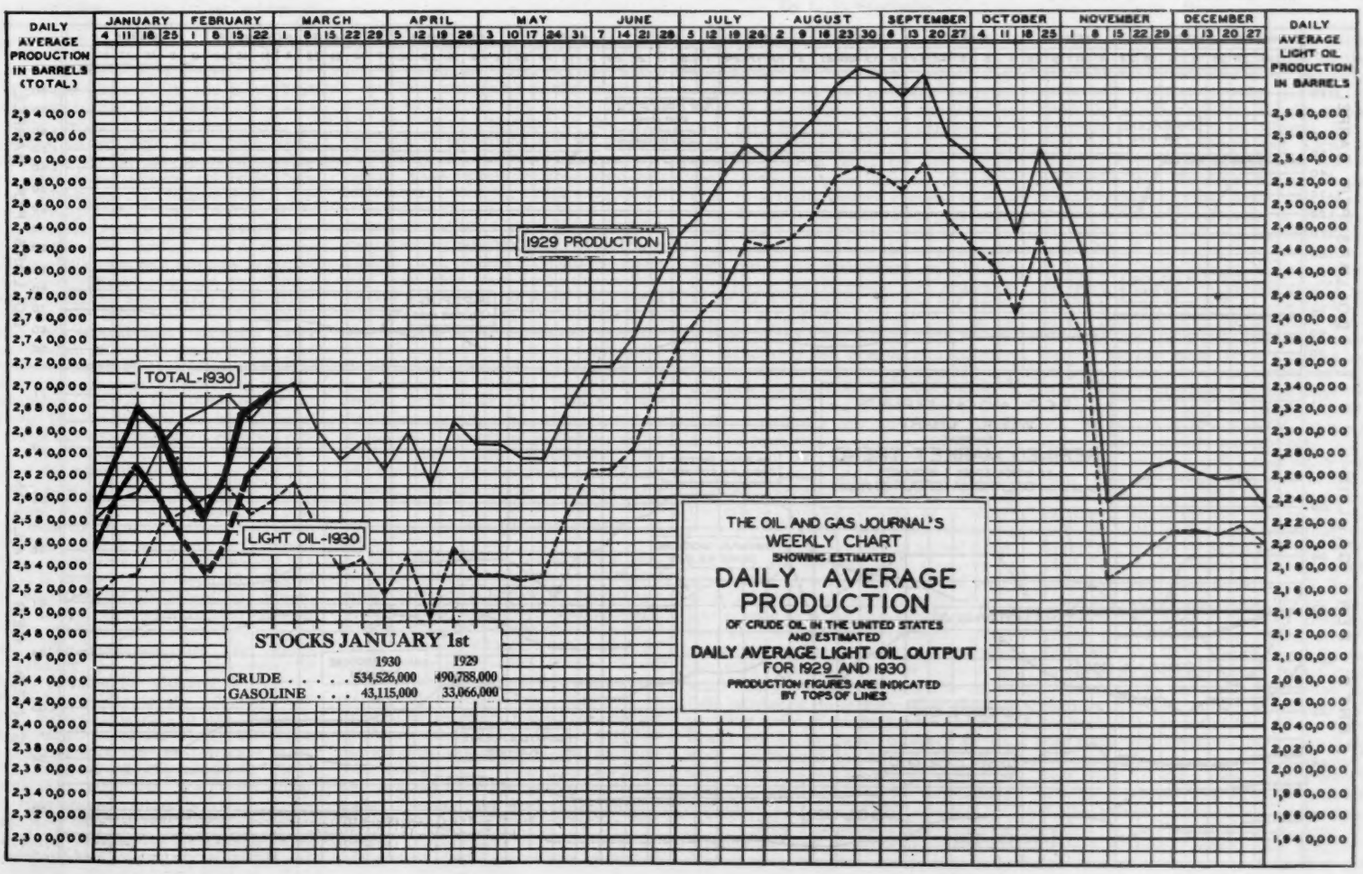
On the whole the outlook appears more bright. A definite adjustment of the situation in California will clear the picture greatly. There is nothing menacing in the Mid-Continent area.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended February 22, and a comparison with the previous week follows:

	Feb. 22		Feb. 15	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	88,535	.....	86,730	.....
St. Louis-Pearson	45,020	.....	43,355	.....
Seminole	230,910	.....	215,055	.....
Northern miscellaneous	225,970	.....	230,530	.....
Southern fields	55,555	.....	56,200	.....
Total Oklahoma	645,990	.....	631,870	.....
West Texas—				
Hendricks	89,480	.....	88,840	.....
Yates	137,148	.....	138,285	.....
Remainder	112,038	.....	112,085	.....
Total West Texas	338,666	.....	339,210	.....
North Louisiana	36,575	5,120	32,400	5,150
Arkansas	16,775	41,390	17,083	41,315
North Central Texas	132,975	.....	135,102	.....
Texas Panhandle	89,055	.....	89,265	.....
East Central Texas	25,226	.....	25,163	.....
Kansas	110,280	.....	110,235	.....
Total Mid-Continent area	1,395,542	46,510	1,380,328	46,465
Gulf Coast	.....	197,689	.....	201,372
Southwest Texas	.....	63,924	.....	65,922
Eastern	138,000	.....	140,000	.....
Rocky Mountain area	73,431	.....	74,402	.....
California—				
Santa Fe Springs	215,000	.....	188,000	.....
Long Beach	118,000	.....	116,000	.....
Huntington Beach	41,000	.....	41,500	.....
Elwood	35,000	.....	60,000	.....
Ventura Avenue	64,000	.....	55,000	.....
Seal Beach	34,000	.....	32,000	.....
Remainder of State	173,000	104,000	170,000	105,000
Total California	680,000	104,000	662,500	105,000
Total United States	2,286,973	412,123	2,257,230	418,759
Grand total	2,699,096		2,675,989	

Total Increase, 23,107 Bbls.; Light Oil Increase, 29,743 Bbls.



Better Gasoline and Kerosene Demand

Domestic Buying Improves in Oklahoma Market. Exporters Place High Gravity Gasoline Orders for March Delivery

By C. O. Willson

A better tone in the domestic gasoline and kerosene market and the placing of large export orders for March delivery were the feature developments of the past few days in the Oklahoma (Group 3) refined market. Continued strength in the natural gasoline market and higher prices on all but the A grade was another bullish change viewed with favor by the sellers.

The heavier products did not share in this improvement. Business in any material suitable for furnace oils including the higher gravity fuel oils and gas oils as well as the regular grades of distillates, has been exceptionally dull and prices are generally lower. The unseasonably warm weather in the Middle West which has been partially responsible for the improved demand in the U. S. Motor grade of gasoline has reduced the furnace oil consumption to a minimum. Supplies of this product were more than adequate even when the demand was at its winter peak and since the first of the month there has been a scramble among some of the sellers to share in the relatively small amount of spot business available and sales during the past week were made over a wide range. Many of the refiners are confining their sales to contracts and are reducing their output in line with the demand. It is expected the unusually warm weather will be followed by a cold spell before the furnace season ends and this may bring a temporary spurt in demand.

Bright stocks and wax are also inactive although the demand for neutral oils has been strong and the high viscosity grades are sold up in Oklahoma. Some recession in bright stock prices is being predicted in the trade as the result of slow spot demand which is resulting in considerable material being run to storage. Mid-Continent bright stock prices have not been lowered from the peak quotations established last fall despite a general lowering of prices in Pennsylvania and other areas. Some lower priced material was reported as being available from at least one source in the Middle West over the past week.

Gasoline Situation

Most refiners reported an improved demand for U. S. Motor gasoline last week and Monday and Tuesday more orders were received than during any similar period in several weeks. The bulk of the spot business is still going to refiners who are quoting over a price range of 5¾ to 6 cents but the contract orders of the larger refiners who have not quoted under 6½ cents have improved. The developments in the crude oil and gasoline tank wagon market explained in these columns last week and the warm weather which has prevailed throughout the consuming territory is responsible for the greater activity. The unexpected gain in retail demand has increased the movement from refineries to bulk stations. A number of rush orders have been received.

Some slow-up in this demand probably will develop when colder weather returns. Sellers, however, are expecting a substantial improvement over the January and early February sales when buying was reduced to a minimum in expectation of the crude oil and tank wagon reductions which finally materialized.

Export Purchases

The uncertainty which has prevailed regarding the action of export companies ended last week when four concerns started buying for March delivery. Four companies, Carter Oil Co. (Standard Oil Co. of New Jersey), Atlantic Refining Co., Cities Service Export Oil Co. and the Sinclair Refining Co., which have been buying large quantities of 390 and 375 endpoint gasoline from month to month since October have shared in the March purchases.

Although no announcement has been made as to the quantity purchased it is understood to be in excess of 15,000,000 gallons. A larger number of refiners shared in the business than in previous months. The purchases were

(Continued on Page 158)

REFINED MARKET BAROMETER

There was little uniformity in refined market trends over the past week. In the Coastal markets including California, Gulf Coast and East Coast the gasoline market continues unsettled with indications pointing to further price reductions due largely to the large supply available from California refineries. At interior points the demand for gasoline has improved and a stronger tone in the refinery market has resulted. Largely the same difference exists between the interior and Coastal markets in regard to kerosene. An oversupply has weakened the fuel oil market in several refining centers and the furnace oil and gas oil grades have shared in this weakness. The lowering of crude oil prices has tended to unsettle the steam refined cylinder stock and the bright stock market and buyers are endeavoring to secure price concessions. The higher viscosity neutrals including the Coastal oils are firm. Natural gasolines are stronger in the Mid-Continent with a steady demand. Petroleum wax prices are off in Pennsylvania with no weakness reported in other refining areas.

Mid-Continent—The placing of large export business in the high gravity grades for March delivery and a better domestic demand, brought better tone in refinery gasoline market. Natural gasoline strong and prices higher. Improved demand for kerosene and prices higher in some areas. Most grades of fuel oil, distillate and gas oil weak. Slow demand for cylinder stocks and wax.

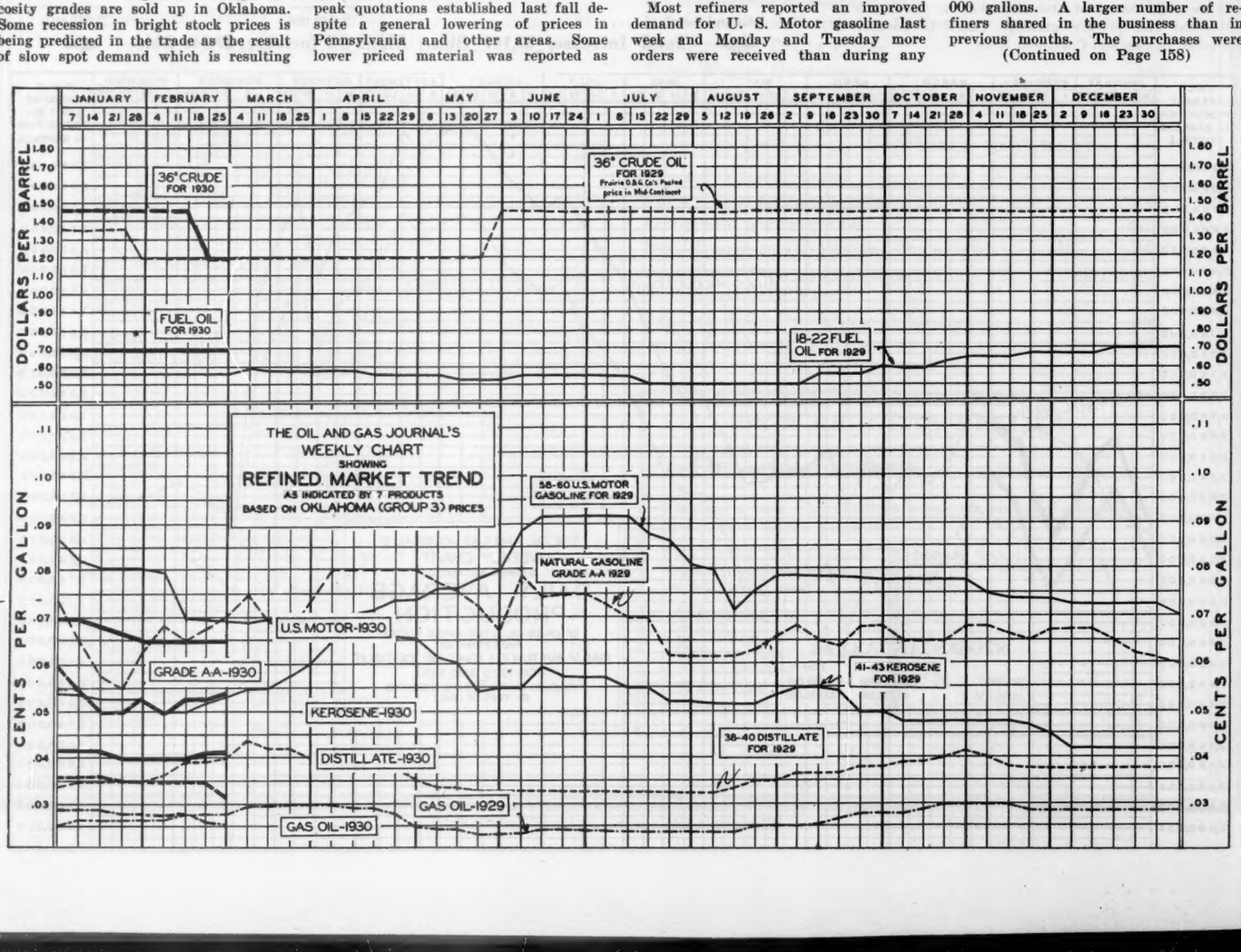
East Coast—Market generally unsettled with undertone of weakness especially in gasoline and kerosene. Fear additional quantities of California gasoline will force reductions in refinery gasoline prices. Furnace oil demand slow. Routine demand for fuel oil. Good demand for Diesel oil. Lily white petrolatum prices lower. Export movement slow.

Chicago—Fuel oils including distillates and gas oils slow and prices lower on some grades. More inquiries for gasoline and market slightly firmer. Kerosene more active.

Pennsylvania—Cylinder stocks slow and bright stocks prices lower. Better movement of gasoline and kerosene.

Gulf Coast—Gasoline weak. Fuel oil and gas oil firm.

California—Market continues unsettled with considerable price cutting in gasolines.



Gasoline Distribution by Waterways

Will Accompany Coming Major Development of Pipe Line Transportation of Motor Fuel in East. To Use Barges and Diesel Tankers

By A. E. Mockler

PITTSBURGH, Pa., Feb. 24.—Pipe line transportation of gasoline, regarded by many as the coming major development in petroleum marketing, will be accompanied by a widespread utilization of waterways for distribution of gasoline and other products in many sections of the country. Eastern river development during the past year has centered attention on Pittsburgh as a key city in eastern petroleum distribution, and it is believed that canalization of the Ohio River system with the Mississippi, opening the Southwest and the Gulf, will result in the development of this city as a virtual seaport. According to reports here, it is believed that 1930 will witness a material broadening of river distribution of gasoline and other refined petroleum products via Pittsburgh's three great rivers, the Ohio, Allegheny and the Monongahela.

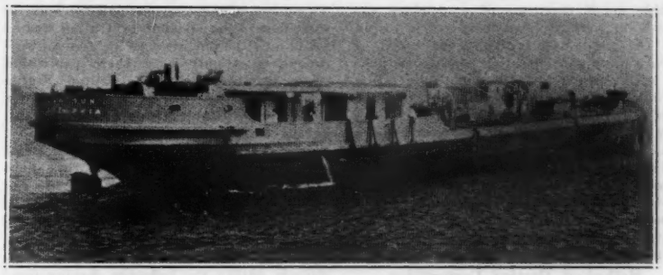
Utilization of these three waterways for petroleum distribution is in line with similar developments in other parts of the United States. Shell Petroleum Corp. announced this week that it has under construction on the Maumee River, near Toledo, a large bulk terminal for supplying the Toledo area with gasoline from the company's refinery at East Chicago. Supplies will be moved to the terminal by the water route and are to be distributed by rail and tank wagon from the receiving point. The Toledo terminal, it is believed, will involve an expenditure of $500,000, and will be but the first of a number of such stations on the Great Lakes, either under construction already or proposed by the Shell interests. These stations will be located in or near centers of consumption, with the object of utilizing the cheap water transportation to the fullest extent in order to reduce transportation and distributing charges.

Gasoline by Barge

Refineries located in the New York City area for the past several years have greatly increased their distribution of gasoline to up-State New York territories through the movement of gasoline by barge from refinery points in New York harbor up the Hudson River. Recent development of the New York State barge canal system has extended this distribution still farther, and a number of large bulk terminals are now in course of construction at strategic distributing points along the State barge canal. Richfield, a new entry into the East Coast field, has several bulk terminals under construction along the barge canal, and Shell, Standard of New York and other companies are reported planning similar expansion. All of this development, of course, is in addition to the coastal movement of gasoline and other refined products by barges, which has been established for some years past.

Standard Oil Co. of New Jersey, which is now transporting gasoline via pipe line from its Bayonne refineries through New Jersey and the State of Pennsylvania, a distance of approximately 371 miles, is in position to materially expand the operations of its subsidiary, Standard Oil Co. of Pennsylvania, through greater utilization of river transportation. The Tuscarora pipe line, which is handling the gasoline movement, is ideally situated for ultimate delivery of gasoline to points on the Allegheny and Ohio Rivers adjacent to the Pennsylvania terminus of the line. The New Jersey company has constructed a large bulk terminal on the river at Pittsburgh, and, with other companies utilizing river transportation to a greater extent, it is believed that Jersey's marketing plans contemplate the establishment of other bulk distributing plants at points on the Ohio, Allegheny and Monongahela Rivers.

According to reports in steel circles here, a considerable number of gasoline barges are now under construction at nearby points, and this development, it is believed, heralds the approach of a closer race for eastern gasoline business on the part of the large integrated companies active in this area.



Diesel-electric tanker on New York State Barge Canal.

Diesel-Electric Tankers

Diesel-electric tankers for operation in sheltered waters, and simple barges will both be utilized in the building up of a network of river distributing systems throughout the eastern area, it is believed. The Sun Oil Co. has met with signal success in the utilization of Diesel-electric tankers for operation in sheltered waters. The company has recently completed two new tankers, the Seneca Sun and the Cayuga Sun, for operation in the New York State barge canal. The new tankers have neither masts nor high superstructures—no part of them is more than 15 feet above the waterline—and they are designed primarily to go under low bridges. The two Sun tankers are each 197 feet long, 31-foot beam, and draw 9 feet of water normally. These dimensions are within the limits of the principal eastern waterways and yet permit of the construction of a tanker sufficiently large to transport 6,000 bbls. of gasoline. Tankers of this type are not only suited for canal and river work, but may also be used in deep-sea work when required. A motor barge similar to the two described recently made a voyage from Philadelphia to Chicago with the utmost satisfaction.

For small tankers of this type, shipping men believe, Diesel-electric drive is ideal. Oil engines, free from fire, are especially advantageous for tankers, of course, and canal and river service both require considerable maneuvering, for which electric drive is ideally suitable. The power plant of each of the Sun barges consists of two 300 horsepower Diesel motors driving 130 kilowatt generators of the new fabricated design, with direct-connected 20 kilowatt ex-

(Continued on Page 154)

Crisis Continues in California

Considerable Progress in Securing Ratification of Plan to Reduce State Output to 609,000 Bbls.

By L. P. Stockman

LOS ANGELES, Calif., Feb. 24.—The crisis confronting California operators due to continued overproduction and a sympathetic weakening in the refined oil market has not yet been passed despite a concerted attempt to effect an immediate reduction in production and the limiting of refinery operations to current demands. Considerable progress has been made toward securing ratification of the proposed curtailment plan which contemplates the relief of state production to approximately 609,000 bbls. a day. Those familiar with existing conditions doubt very much that state production will be relieved sufficiently to reach the present objective, in which event it remains to be seen whether major companies will continue the attempts to effect stabilization or permit the law of supply and demand to determine the ultimate outcome. If the present curtailment plan fails to effect the desired result, either through failure of operators to reduce production or by delaying the curtailment period, it can result only in drastic price cuts. Every attempt has been made to prevent this price cut but the cards are on the table face up with the ultimate outcome in plain view.

The seriousness of the situation confronting California operators is reflected quite clearly by a survey of the changes in stocks during the month of January. During this period crude and refined oil stocks increased 1,530,390 bbls. This increase occurred in spite of curtailment work during the period in question and further substantial accumulation will be recorded in February due to the opening up of production during the six-day flow test recently concluded. Light refinable crude and gasoline stocks increased 598,656 bbls. and 1,366,184 bbls., respectively, during January, and both will undoubtedly show a further increase during February.

Operators have tentatively approved the movement under way to reduce state production to current requirements and the recommendation of the general committee based on findings of a technical advisory committee is being submitted to each field for final ratification and immediate application. Elwood was not only the first field to ratify the new curtailment plan but was likewise the first area to actually reduce current production down to its allowable maximum. Long Beach was the next field to put its stamp of approval on the new curtailment plan and curtailment will be put into effect simultaneous with reduction at Santa Fe Springs. It was not necessary to submit the proposed plan to operators in the Long Beach Field for approval as they had previously authorized Umpire Anderson to accept formally any equitable cut provided the new allowable production was not below 90,000 bbls. daily. Under the new plan Long Beach will be permitted to produce 89,422 bbls. per day so that to all intents and purposes it has met with general approval. Umpire Anderson immediately assured the general committee that as a representative of Long Beach operators he would accept the new cut as agreed upon. Santa Fe Springs tentatively approved its new status Monday afternoon and operators are expected to sign on the dotted line as soon as a few objectionable details have been worked out. Huntington Beach operators met Tuesday and while the plan met with approval it may be difficult to apply the projected cut over the entire field because of the large number of small pumping wells. Ventura Avenue and Seal Beach are in the same category as Elwood and Long Beach in that those operators affected had previously agreed to abide by the findings of the fact-finding committee.

New Curtailment Plan

Under the new curtailment plan to reduce state production to approximately 609,000 bbls. per day the various fields throughout the State were grouped by the general committee according to their status. Group No. 1, which consists of flush and semiflush fields, includes Santa Fe Springs, Long Beach, Elwood, Ventura Avenue, Seal Beach and Alamitos Heights, Kern Front, Mount Poso, Round Mountain and Maricopa Flats. Group No. 2 includes all other fields except Kettleman Hills, which because of its present status was placed in a separate group called No. 3.

Based on a new set-up revised within the past few days to include results of all flow tests, Group No. 1 is credited with a potential daily production of 664,966 bbls. and an actual current production of 448,400 bbls. It is proposed to reduce production in this group by 43 per cent so that under the new plan its aggregate production will total 379,031 bbls. daily. Group No. 2 has a potential daily production of 365,420 bbls. and under the new plan will be cut 40.76 per cent. This will reduce the total production of Group 2 to 216,464 bbls. daily. In Group No. 1 the cut will be 43 per cent for each and every field, but in Group No. 2 the projected cut will vary all the way from nothing to 100 per cent depending upon conditions in each field. Lease obligations and other factors prevented a straight cut in every field in Group No. 2. Coalinga, Kern River, Fruitvale, Elk Hills, Capitan and Santa Barbara for instance already reflect cuts in excess of 43 per cent. Production at Coalinga has been cut approximately 72 per cent of its potential for the past several years and operators have agreed to maintain this cut notwithstanding that some other fields are reducing production only 43 per cent. The ultimate outcome of the present attempt to reduce production to current demands remains to be seen although considerable progress has been effected.

Unit Operation Reports Summarized

Results of Study by Group Named by Petroleum Section, American Institute of Mining and Metallurgical Engineers

By Earl Oliver,* Ponca City, Okla., and J. B. Umpleby,† Oklahoma City, Okla.‡

This division, at its October, 1929, meeting at Tulsa, Okla., resolved: "That the Petroleum Division of the A.I.M.E. make a special study of the advantages of unit operation and means of promoting it and that a record of existing results be assembled for general discussion at the New York meeting in February, 1930."

To carry out the purposes of that resolution, Joseph Jensen, of Los Angeles, was named chairman of a group to report on unit operation in California; Fred E. Wood, of Casper, on the Rocky Mountain region; A. W. Ambrose and C. E. Beecher, of Bartlesville, on Kansas and Oklahome; Frederic H. Lahee, of Dallas, on Texas, Arkansas, Louisiana and New Mexico; and Harry H. Hill and E. L. Estabrook, of New York City, on the Appalachian region and foreign fields. Each of these gentlemen selected as helpers many members of the Petroleum Division. Their several reports are expected to give a broad picture of the actual status of unit operation throughout the world.

It is believed that in connection with this study a review of the simple principles of unit operation would be helpful. To that end, the following discussion is submitted. It is not to be considered in any sense as the conclusion of the committee, but rather as material submitted for its consideration and represents at this time only the viewpoints of its authors.

Growth of the Oil Industry

In 70 years the oil industry has grown from a single well on Oil Creek, Venango County, Pennsylvania, producing 25 bbls. per day to more than 400,000 wells scattered over five continents with daily output of 4,000,000 bbls. In that time petroleum has expanded from its simple use as a medicine in a few localities to a multitude of diverse uses in homes of every country the world over. During those years the oil fields of the United States have produced two-thirds of the world's output and have shipped their excess production into almost every country.

In those years several hundred thousand good wells in the United States declined into small ones and depleted shallow deposits gave way to deep zones; so that the United States crude oil industry gradually changed from one of low cost production to one of higher cost. Throughout its entire life it has labored under two serious economic disadvantages, namely, constantly recurring periods of demoralization through overproduction, and competitive development methods that are wasteful.

Development of Foreign Competition

During the transition from low to higher cost production in the United States, events even more significant were taking place in foreign lands. Jungles were tamed and deserts conquered. Oil deposits were found and developed until, in the words of Sir John Cadman, "the globe is now drenched with a commodity which, although necessary to life, involves but an irregular and sometimes meager expenditure of life in its primary production." These are low-cost foreign deposits demanding their share of the world's markets.

As a consquence the United States petroleum industry now finds itself "sending coals to Newcastle." A barrel of high production-cost oil from Texas meets in London a barrel of low production-cost oil from Persia; one from Los Angeles meets in Tokyo another from the Dutch East Indies; even in New York one from Tulsa meets one from Maracaibo—with the inevitable result that occurs in every case where a high production-cost product is met in competition by one of low production-cost.

Other matters being equal, the profitable trade territory of a product extends only so far from the point of origin as the production cost at the point of origin plus transportation cost equal those of a like product to the same point from a competitive region. On this basis the United States petroleum industry is finding its profitable trade territory more and more circumscribed. This tendency will increase rather than decrease during the years immediately ahead as foreign fields are opened. At the same time the United States fields continue to pile up potential overproduction at an unprecedented rate.

Method of Meeting Competition

Thus we have an entirely new set of conditions that face the United States petroleum industry. Two differences stand out. In former years there were no vast proven reserves piled up behind the overproduction. Neither were there foreign competitors who could produce vast quantities of oil at much lower cost. These two new conditions call for specific remedies. First, output of United States pools must be curtailed to an amount sufficient to supply only their profitable trade territory. Second, United States production costs must be lowered in order that the profitable trade territory shall be maintained at a maximum. Finally, some character of government relief might become necessary; but that help would naturally follow, not precede application of relief measures already available.

The Federal Government, the American Petroleum Institute, and many individuals within the industry, having foreseen the conditions that are described, have attempted to formulate remedies that will bring about the results above set forth. Prorations and shutdowns are being utilized, but these are nophere regarded as more than temporary expedients. They are difficult to enforce and do not eliminate waste, which is so necessary to reduce costs. Without exception the many studies that have been made have resulted in the conclusion that general adoption of what has now come to be known as unit operation offers most promise as a first step in bringing about the objects sought.

Unit Operation

The term as it is being used in the industry has not yet reached an exact definition but in general it implies that all properties in the respective oil and gas pool shall be consolidated into a single operating unit in some manner that will eliminate the competitive drilling-drainage feature in its development and operation, and will permit of utiliz-

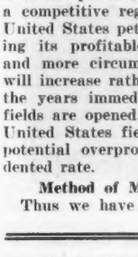
*Chairman, Unitization Committee, A.I.M.E.
†Chairman, Petroleum Division, A.I.M.E.
‡Before A.I.M.E., New York, February, 1930. Copyright, 1930, by A.I.M.E.

Oil Questions at A.I.M.E. Meeting

Petroleum Section Endorses Unit Operation and Self Control by Industry. World Situation Discussed

By A. E. Mockler
New York Bureau, The Oil and Gas Journal

NEW YORK, Feb. 22.—General endorsement of unit operation, and the principle of self-control for the oil industry rather than government control formed the outstanding features of the annual meeting of the Petroleum Section of the American Institute of Mining and Metallurgical Engineers which ended here this week.



Aside from the general adoption of unit operation, which was stressed as the paramount need of the industry in effecting stabilization and lowering costs, speakers called upon the oil industry to recognize the steadily growing competition in world markets by oil from low-cost fields through the curtailment of United States pools to a point where they are sufficient only to supply their profitable territory. Lowering of production costs was stressed as a secondary factor, with government relief seen as the final solution, after all co-operative activities within the power of the petroleum industry have been exhausted. This latter contingency, incidentally, is not generally looked for.

Recent unfavorable developments in the oil industry, particularly with respect to crude oil prices, had aroused widespread interest in the A.I.M.E. meeting, and the sessions of the petroleum section were crowded with an attentive audience of oil men. The crude oil price cuts, it was generally conceded among members attending the sessions, may be expected to aid materially in crystallizing sentiment for unit operation in quarters which have hitherto been lukewarm toward the idea.

World Oil Situation

The meetings of the various groups of the petroleum section presented an interesting symposium of the world oil situation, and drove home the fact that the American oil industry is presented with vital problems in its further expansion activities, particularly with respect to the sale of United States refined products in foreign markets, which are seen as steadily narrowing under the competition of low-cost foreign oils.

Dr. George Otis Smith, director of the United States Geological Survey, urged co-operative action within the industry as the logical solution for overproduction, rather than government control.

"This meeting," said Doctor Smith, "is itself a demonstration of the widespread interest in the more efficient development and operation of oil fields. The views presented are sufficient evidence that the engineering and economic principles fundamental to the idea of unit operation are much more generally accepted than they were even a year ago. Real progress has been made in putting these principles to the test."

Oliver-Umpleby Report

The principles of unit operation were outlined by Earl Oliver of Ponca City, chairman of the unitization committee of the A.I.M.E. and J. B. Umpleby of Oklahoma City, chairman of the organization's petroleum division.

The report outlines the incomplete recovery resulting from competitive extraction, and points out the increase in development and operating costs incidental to this competitive operation. "Under competitive development," it states, "many more wells are drilled than are necessary for the economic extraction of the products from the reservoir. Frenzied, costly development takes place, bringing about sharp peak loads, the handling of which requires extensive facilities over a short period. These are hastily planned and soon operating only to a small part of their capacity. Pipe lines are notable examples. Expensive surface storage is built. Irregular labor conditions are promoted."

A better understanding of unit operation, the report continues, is tending to eliminate the fear that unit operation violates antitrust laws. The greatest deterrent to the adoption of unit operation, the report states, is the customary reluctance human beings experience in breaking away from old habits and practices and adopting new ones. No serious objection to unit operation has been found but it requires a degree of concerted action difficult to obtain. The rapidity of its general adoption, adds the report, will depend upon educational processes and economic pressure.

The report concludes with general and specific methods of unitization of oil field operations.

Joseph Hensen, chief petroleum engineer of the Associated Oil Co., outlined the success of unit operation in California. California operators have gone a step further in conservation activities, he stated, through the limitation of penetration of the oil zone.

"In the past few years," said Mr. Jensen, "the purpose of unit operation has been given much consideration in California. It has been and is being practiced as to several wildcat wells that have been drilled and areas that are being tested."

Unit Operation in Rockies

Orderly development of the Rocky Mountain oil pools has been due in large measure to the principle of unit operation, said F. E. Wood of Casper, Wyo., who reviewed unitization in that region. "Since the earliest discoveries of oil in the Rocky Mountain area," he said, "the spirt of co-operation in drilling and production programs has prevailed. There has scarcely been a field which has not been developed in an orderly manner through mutual agreement between competitive operators. An appreciable saving has resulted as many unnecessary wells has been eliminated. We have unit operation plans and agreements which were developed at an early date. Rock River, found in 1918, has been a unit operation. One of the first prorate agreements ever attempted occurred in Salt Creek in 1921. Teapot, first developed in 1922, has been a unit operation; the lessee, the Government, and the lessor, one operator. South Casper Creek first found in 1918 has been developed as a unit. Rex Lake found in 1923 is a unit operation. The list might be extended materially but it serves to indicate that the Rocky Mountain region

(Continued on Page 119)

ing to a maximum forces of expulsion native to the reservoir.

In the typical virgin pool natural gas, oil and water are found confined together under high pressure, each occupying its respective place in the reservoir. In many cases this pressure is sufficient, if controlled and directed, to expel a large percentage of the oil content from the reservoir by way of flowing wells without the use of other equipment. It is obvious that most efficient oil recovery is effected if escape for any of these fluids in the reservoir is permitted only through holes drilled into the oil zone, since in that event neither gas nor water could escape without driving oil ahead through the reservoir rock to the point of escape. That procedure would be followed in unit operation.

Competitive Extraction Promotes Incomplete Recovery

Under the competitive drilling system, however, the location of wells is determined by surface boundaries, not by reservoir content. Each landowner is permitted to drill as many wells on his land into the common reservoir as he desires and is entitled to all oil and gas he can draw out through these wells. If he drills into a gas zone he draws off gas, thus reducing the reservoir pressure without utilizing it to assist in the work of oil recovery. Oil in the reservoir rock is thus robbed of force that would otherwise move it to the well. For this and other reasons to be considered, oil extraction under competitive drainage is sometimes as low as 10 per cent, leaving 90 per cent lost to recovery, notwithstanding there might have been sufficient energy stored in the reservoir originally to bring about several times the recovery if it had been efficiently controlled. The energy cannot be so controlled under competitive extraction.

Two other factors contribute to low recovery under competitive extraction. When pressure is reduced, as it must be under that method, oil becomes more viscous through loss of absorbed gas, and, as a result, becomes more difficult to move through minute pores of the reservoir rock. Therefore dissipating gas from an oil sand lessens the propulsive force and increases the need for it. Also, when the gas-sand portion of the reservoir becomes emptied of its gas content, oil migrates into that portion and is lost to recovery on account of adherence to sand previously unsaturated with oil. Under unit operation as pressure becomes lowered gas would be reintroduced into the dry gas-sand portion in order to maintain pressure.

Competitive Extraction Increases Developing and Operating Costs

Under competitive development many more wells are drilled than are necessary for the economic extraction of the products from the reservoir. Frenzied, costly development takes place, bringing about sharp peak loads the handling of which requires extensive facilities over a short period. These are hastily planned and soon operating only to a small part of their capacity. Pipe lines are notable examples. Expensive surface storage is built. Irregular labor conditions are promoted. Harmful social conditions result.

Competitive Extraction Promotes Overproduction

Unrestrained competitive extraction from an oil pool is not only responsible for vastly reduced recovery, inadequate gas utilization, and increased cost of development and operation, but in addition it is largely responsible for another serious evil in the United States petroleum industry; namely, overproduction with its demoralizing market conditions.

Oil and gas tend to flow from all points in the reservoir toward the point of lowest pressure. The owner who so develops and operates his property as to induce oil and gas to flow from the land of another into his own land and escape through his own wells, is operating entirely within his legal right and in harmony with long established practices of the industry. Consequently, in competitive development, the rules of the chase supplant the customary rules and stabilizing influences of industry. The necessities of capture interfere with free operation of the law of supply and demand.

Production should increase quickly in response to increased price and decrease with equal facility in response to decrease in price. This can occur only when competitive extraction is absent. For that reason the individual pool is the natural competitive unit. Its products compete in the market place with products from other pools. Distinction should be made between competition in sale and competition in extraction. The first affords that protection to the consumer which is necessary; whereas, the second in no wise protects the consumer, but it demoralizes the industry.

Examples of Both Methods

As more or less typical examples of the two methods of control, two pools are described. One is a small American pool with divided land holdings. The other is a foreign pool that is being operated as a unit.

In the American pool two-thirds of the total area contained gas only, while one-third contained oil. The reservoir rock was sand, fine but regular in texture, and continuous throughout both the gas and oil portions of the reservoir, with freedom of movement between them. The pool was discovered and drilled some 10 years ago in the competitive manner that characterizes United States oil field development. The gas was depleted rapidly through gas wells, leaving the oil to be produced more slowly. Recently several complete cores were taken from the oil sand. Laboratory examination of these cores disclosed that 94 per cent of the original oil content yet remained in the reservoir rock, with expectation that 90 per cent will remain when the wells cease producing. The total amount of oil to be extracted under these conditions will be approximately 12,000,000 bbls., leaving somewhat over 100,000,000 bbls. in the sand practically lost to recovery. Sufficient gas was stored under pressure in that reservoir to drive out much of the 100,000,000 bbls. that remain if it had been conserved and so utilized.

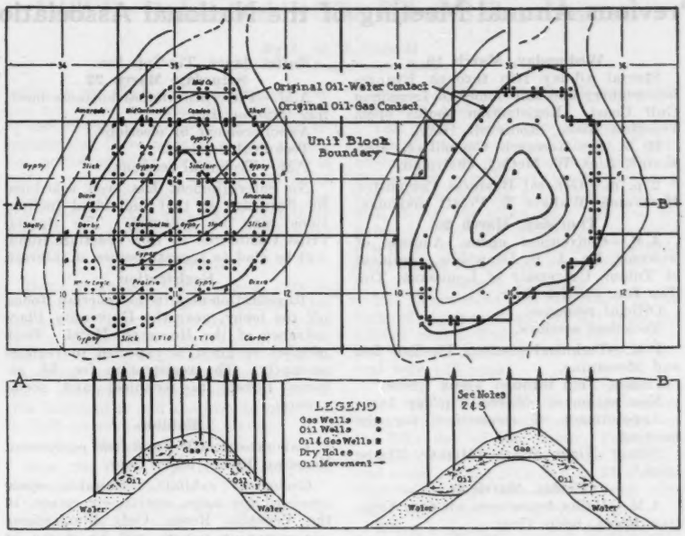


Figure 2—Hypothetical example: A, competitive development; B, unit development. (1) Line A-B in upper plate is shown in cross-section below. (2) Under unit operation gas wells are closed in. (3) Under ideal unit operation as gas is being removed from the reservoir with the oil through the oil wells it would also be forced back into the gas sand through gas wells to maintain the reservoir pressure.

In striking contrast with this method of development is the famous Masjid-i-Suleiman (Temple of Solomon) Field in Persia. It is 20 miles long by 4 miles wide, operated as one unit. It was opened in 1912. The reservoir rock is a steeply folded cavernous dolomitized limestone, 900 feet thick. As in the American pool, gas was found on top of the structure but the gas wells were closed in and the gas is permitted to escape only through the wells drilled into the oil zone. It thus drives oil ahead through pores of the reservoir rock to the point where pressure is relieved by an oil well. The wells averaged 80,000 bbls. per day initial and continue large up to the time they show an excess amount of gas by virtue of the gas-oil level in the reservoir becoming lowered. Then they are closed in and the wells lower on the structure are opened.

The potential daily output of the pool is greatly in excess of that which is utilized, although only a small number of wells have been drilled on this large structure in comparison with characteristic development in the United States. The pool has produced 300,000,000 bbls. of oil and has many years proved reserves at the present rate of extraction. The oil wells have flowed, and continue to flow, their production at all times, as the owners express "with no more trouble than opening a tap to draw water for the bath." Very complete recovery from the reservoir rock is being made in this pool by the unit type of development. It will be noted that in this pool oil wells are permitted to flow until they change to gas wells, whereas under competitive develop-

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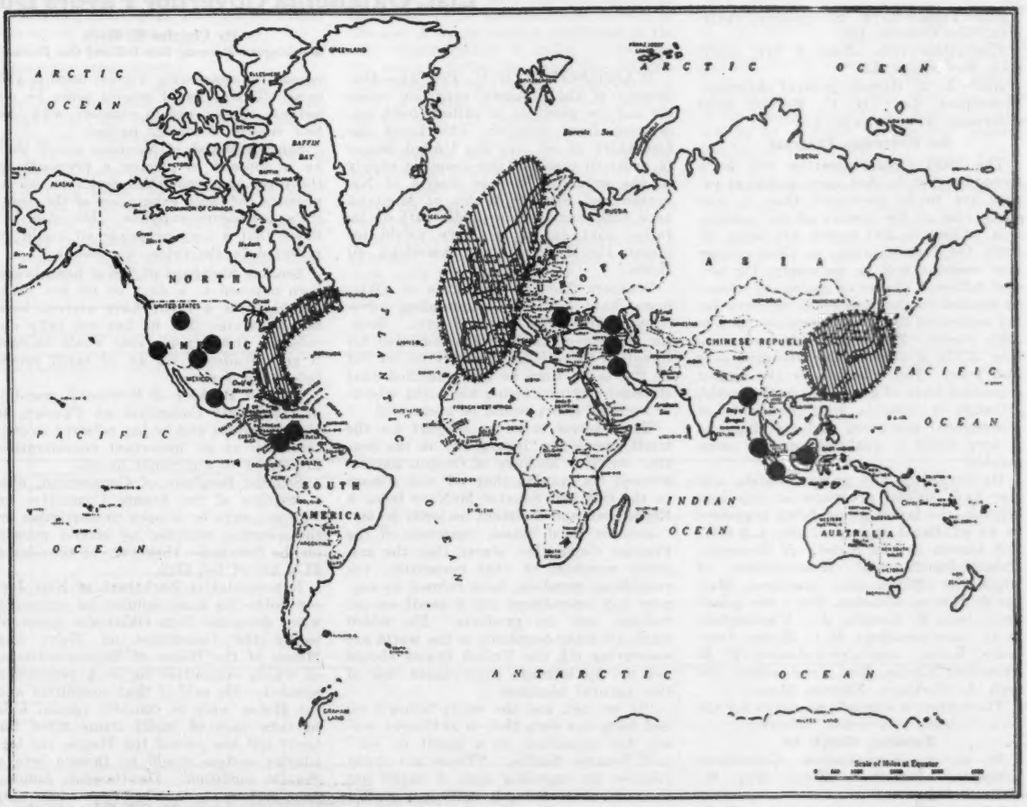


Figure 1—Map of world showing oil fields with excess crude oil (see solid circles) and important markets formerly supplied by American oils that are now being gradually shared by lower cost foreign oils (see hatched circles).

New Orleans Program for Geologists

More Technical Papers to Be Presented Than at Any Previous Annual Meeting of the National Association

The fifteenth annual meeting of the American Association of Petroleum Geologists will be held at New Orleans, La., March 20-22, 1930. The Roosevelt Hotel will be headquarters for the convention. Arrangements are in charge of the executive committee composed of the five elected officers of the association, with the co-operation of the New Orleans Convention and Publicity Bureau, Inc., and the management of the Roosevelt Hotel. Hotel reservation should be made direct to the Roosevelt, which will also find accommodations in any other hotel upon request. General inquiries may be sent to A.A.P.G. Headquarters, Box 1852, Tulsa, Okla.

Following are the officers of the association and the chairmen of the several committees:

A.A.P.G. officers and committee on general arrangements—J. Y. Snyder, president, Shreveport, La.; Fred H. Kay, first vice president, New York City; R. S. McFarland, past president, Tulsa; A. R. Denison, second vice president, Fort Worth, Tex.; F. H. Lahee, third vice president, Dallas, Tex.

Technical Program—F. H. Lahee, general chairman, Dallas, Tex.; W. C. Spooner, chairman Gulf Coast papers; G. C. Gester, San Francisco, Calif., chairman California papers; W. B. Heroy, New York City, chairman foreign papers; D. C. Barton, Houston, Tex., chairman geophysical papers.

Shreveport committee—M. W. Grimm, chairman, Shreveport, La.

Reception—R. A. Steinmayer, chairman, New Orleans, La.

Stunts—George R. Stevens, chairman, Shreveport, La.

Ladies—Mrs. S. P. Borden, general chairman, Shreveport, La.; Mrs. R. A. Steinmayer, local chairman, New Orleans, La.

Side Trips—R. A. Steinmayer, chairman, New Orleans, La.

Evangeline Trip.—John S. Ivy, chairman, Shreveport, La.

Golf—L. A. Barton, general chairman, Shreveport, La.; H. C. Ferrell, local chairman, New Orleans, La.

An Extensive Program

The 1930 annual meeting will be a record-breaker in that more technical papers are to be presented than in any other year of the history of the association. Close to 100 papers are being offered for the program, so that concurrent sessions will be necessary, the several different phases of geological science as applied to the petroleum industry being separated for special sessions in separate rooms. The membership now numbers 2,300, a considerable increase over last year. The A.A.P.G. is the largest organized body of geologists in the world, although it upholds high standards of professional education and training and is very strict in qualifications for membership.

Geophysicists and paleontologists will also have special programs at this convention, the latter group being organized as an affiliated society of the A.A.P.G., and known as the Society of Economic Paleontologists and Mineralogists of which the officers are: president, Marcus A. Hanna, Houston, Tex.; vice president, John B. Reeside, Jr., Washington, D. C.; past president, R. C. Moore, Lawrence, Kans.; secretary-treasurer, F. B. Plummer, Austin, Tex.; and editor, Joseph A. Cushman, Sharon, Mass.

The tentative schedule of events for the New Orleans convention follows:

Tuesday, March 18

10 a. m.—Constitution Committee, Mezzanine, Roosevelt Hotel, Max W. Ball, chairman.

2 p. m.—Executive Committee, J. Y. Snyder, president.

Wednesday, March 19

Special all-day trip through Evangeline country and salt domes of Louisiana Gulf Coast. Registration booths open, Venetian Room, Roosevelt Hotel.

10 a. m.—Research Committee, Mezzanine, Alex W. McCoy, chairman.

2 p. m.—General Business Committee, Mezzanine, Wallace E. Pratt, chairman.

Thursday, March 20

A.M.—Convention opens. Address of welcome, Dr. A. B. Dinwiddie, president of Tulane University of Louisiana, Tip-Top Inn, twelfth floor.

Official response.

Technical sessions.

P.M.—Technical session, Tip-Top Inn and Mezzanine.

Ladies. Trip through Vieux Carre.

Nomination of officers, Tip-Top Inn.

Appointment of committees for the meeting.

"Stunt Night on the Mighty Mississippi."

Friday, March 21

A.M.—Ballot boxes open all day, Venetian Room, lobby floor.

Technical sessions, Tip-Top Inn and Mezzanine.

Noon—Ladies' luncheon.

P.M.—Technical sessions.

Golf tournament. Bostick trophy.

Ladies theater party.

Illustrated lecture, "Some Features of Active Volcanoes," Dr. A. L. Day.

Buffet dance, Tip-Top Inn.

Saturday, March 22

A.M.—Fifteenth annual business meeting, Tip-Top Inn.

Announcement of elections.

Technical sessions.

P.M.—Technical sessions.

No entertainment has been scheduled for Saturday so that individual inclinations may be followed. The Special Trips Committee in the Venetian Room will be glad to suggest points of interest.

Registration

Registration desk in the Venetian Room, off the lobby, near the University Place entrance of the Roosevelt Hotel. Each member or guest is expected to register promptly. The registration fee, $3, secures tickets to technical and social events.

Exhibits

Laboratory, office, and field equipment. Venetian Room, lobby floor.

Geological exhibits. Suitable space provided for maps, charts, etc cetera, in the Venetian Room. Only illustrations accompanying papers will be shown at the technical sessions in the Tip-Top Inn.

Following is a list of technical papers that are on the program of the A.A.P.G. meeting:

Mississippi Embayment and Gulf Coastal Plain

Contribution to the Cenozoic History of the Texas Plain, Charles Laurence Baker, Houston, Tex.

Mapping of Formations in the Gulf Coastal Plain, Donald C. Barton, Houston, Tex.

Producing Possibilities of the Gulf Coast Salt Domes, Donald C. Barton, Houston, Tex.

Marine Oligocene of the Coastal Plain of Texas and Louisiana (by title), Alva C. Ellisor, Houston, Tex.

Sedimentation in the Eastern Part of the Mississippi Embayment in Eocene Time, Ralph E. Grim, University Mississippi.

The Post-Oligocene Subsurface Problem of Texas and Louisiana, Marcus A. Hanna, Houston, Tex.

The Clay Creek Field, Washington County, Texas, F. E. Heath, Dallas, Tex., J. A. Waters, Dallas, Tex., and W. B. Ferguson, Brenham, Tex.

Cretaceous and Tertiary Sediments of Kentucky, Illinois, and Missouri, J. E. Lamar, Urbana, Ill.

The Refugio Field, Refugio County, Texas, A. G. Maddren.

Salt Flat Field, Caldwell County, Texas, L. F. McCollum, C. J. Cunningham, and S. O. Burford, San Antonio, Tex.

Paleozoic Rocks in Wells in the Gulf Coastal Plain South of the Ouachita Mountains, Hugh D. Miser, Washington, D. C.

(Continued on Page 120)

Senators Considering Tariff on Oil

Sentiment Seems to Favor Maintenance on Free List. Oklahoma Governor Favors Duty on Crude

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Feb. 24.—Discussion of the proposed tariff on crude oil and its products is calling forth opposition from Senators who favor the free entry of oil into the United States in order to conserve the domestic supply in the ground. Senator Norris of Nebraska and Senator Walsh of Montana have both come out in public with declaration that an import duty would increase the drain on the American oil fields.

Senators Thomas and Pine of Oklahoma have been the outstanding advocates of the tariff in the Senate. Senator Watson of Indiana has indicated his intention to vote for the duty on oil but at the same time he has qualified that statement by expressing his doubt whether such an effort would be successful.

There seems to be no support for the tariff among the "insurgents" of the Senate. Senator McNary of Oregon has expressed his opinion that oil will remain on the free list, Senator McNary being a Republican and assistant majority leader.

Senator Reed Smoot, chairman of the Finance Committee, states that the majority members of that committee, the republican members, have refused to support any amendment for a tariff on petroleum and its products. He added while all other countries in the world are conserving oil, the United States should not act to increase extravagant use of this natural resource.

"If we can use the other fellow's oil and keep our own that is sufficient reason for opposition to a tariff on oil," said Senator Norris. "There are many reasons for opposing such a tariff but that of conservation is sufficient to dispose of it." Care for the national defense, said Senator Norris, is another reason for conserving our oil because the most efficient naval vessels must be oil burners if they are to compete with the best vessels of foreign navies.

Senator Walsh of Montana stated that he is opposed to placing a premium in the form of a protective tariff on oil to promote the rapid exhaustion of the country's petroleum supplies. He also believes that a duty on crude oil would be reflected in the price of gasoline.

Senator Sheppard of Texas has always been opposed to a duty on oil but since advocates of a tariff have arrived here he now states that he has not fully decided on the way his vote would be cast if an amendment for an oil tariff comes before the Senate.

Senator Barkley of Kentucky, member of the Senate Committee on Finance, is also uncertain and he has referred to conservation as an important consideration in respect to any tariff on oil.

Senator Bingham of Connecticut, also a member of the Senate Committee on Finance, says he is open to conviction on the question whether oil should remain on the free list. However, he considered $1 a barrel too high.

Representative Bacharach of New Jersey holds the same opinion he expressed when delegates from Oklahoma appeared before the Committee on Ways and Means of the House of Representatives, of which committee he is a republican member. He said if that committee and the House were to consider special bills to take care of tariff items after the tariff bill has passed the House, the legislative system would be thrown into a chaotic condition. He thought, judging from statements that had been made, that internal dissensions between the independent operators and the large oil companies growing out of the government's efforts to restrict production in the interest of conservation were at the bottom of the trouble now being experienced by the oil producers.

OKLAHOMA'S GOVERNOR ENTERS TARIFF FIGHT

That Governor Holloway of Oklahoma would leave Oklahoma City for Washington on Tuesday to assist Wirt Franklin and the Independent Petroleum Association of America in the fight for a tariff on crude oil and refined oil imports was announced in Tulsa Monday evening at a large meeting of oil men and other business men in the Crystal Ballroom of the Mayo Hotel. It was also announced that Governor Holloway had telegraphed Governors Long of Louisiana, Moody of Texas, Parnell of Arkansas, Adams of Colorado and Reed of Kansas asking them to go to Washington to aid in petitioning Congress for an oil tariff.

Governor Holloway in a statement said he was taking the step primarily to protect the revenues of the State of Oklahoma and secondly to aid oil operators and those whom they employ.

The meeting was presided over by James G. Cloud, chairman of the Tulsa division of the association and was called for the purpose of acquaintaing business men generally with the details of the campaign being waged by the association and to win new memberships.

Addresses were made by James H. Gardner, former Congressman E. B. Howard, Victor F. Barnett, M. J. Glass, E. P. (Tex) Jones of Okmulgee, C. C. Harmon

(Contined on Page 158)

Magnetogram Service Is Inaugurated

Reports of Magnetic Storms as They Occur Will Be Published in The Oil and Gas Journal

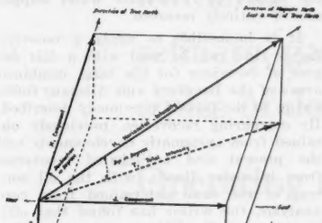
By L. G. E. Bignell
Petroleum Engineering Editor

In keeping with its general policy to print items of interest to every department of the petroleum industry The Oil and Gas Journal will inaugurate a new service at once which should prove of benefit to the geophysical departments of the production companies, especially to those doing magnetometer work.

This new service will consist of securing and printing telegraphic information of magnetic storms as they occur and will be based upon information furnished by the United States Coast and Geodetic Survey from its Tucson, Ariz., station.

In doing field work with the magnetometer it has been found that periodic and slow changes in terrestrial magnetism are due to extraterrestrial causes and appear to be closely connected with the passage of sun spots and the changes in the intensity of the sun's luminosity due to their presence.

These disturbances are commonly referred to as "magnetic storms" and they



Components of the earth's magnetic field.

have been found to be of greater frequency at the time of sun spot maximum than at the time of sun spot minimum. The sun spot maximum for the current cycle is now past, and, therefore, fewer storms may be expected in the next few years.

A study of magnetic storms for a number of years brings out the evident fact that their occurrence bears a definite relation to the 27-day period in which the sun rotates on its axis. The appearance of the storms is, however, somewhat irregular and there may be several during one period of solar rotation, but that is rather unusual. In a majority of cases there is only the one storm during the solar period. It is also a fact that there may be no storms during several solar periods.

Special Articles

Below is given a list of special articles prepared exclusively for The Oil and Gas Journal by L. Spraragen covering the use of the magnetometer and giving surveys made of several Mid-Continent states to which the reader is referred for more detailed information concerning the use of this instrument and the results obtained in field surveys in several states:

Spraragen Articles

Sept. 20, 1928, page 106—Geophysical methods discussed.

Sept. 27, 1928, page 38—Use of Magnetometer in oil fields.

Oct. 4, 1928, page 32—Magnetometers chief use in prospecting.

Oct. 11, 1928, page 41—Magnetometer study of Kansas.

Oct. 18, 1928, page 57—Kansas magnetometer highs and lows.

Oct. 25, 1928, page 50—Kansas has several promising areas.

Nov. 1, 1928, page 33—Use of the magnetometer in Oklahoma.

Nov. 8, 1928, page 37—Magnetometer survey of Oklahoma.

Nov. 15, 1928, page 42—Oklahoma's promising magnetic areas.

Dec. 20, 1928, page 25—Magnetometer study of State of Texas.

Jan. 3, 1929, page 34—Magnetometer possibilities of Texas.

Jan. 24, 1929, page 30—Magnetometer survey of Arkansas.

Feb. 14, 1929, page 42—Arkansas magnetometer study results.

Feb. 21, 1929, page 118—New calibrating device aids magnetometer work.

April 4, 1929, page 103—Magnetometer survey of Louisiana.

April 18, 1929, page 85—Magnetometer survey of Louisiana.

May 16, 1929, page 34—Magnetometer study of Mississippi.

June 6, 1929, page 48—Magnetometer results in Mississippi.

June 27, 1929, page 101—Magnetometer results in Mississippi.

Jan. 2, 1930, page 37—Magnetometer results in Alabama.

This very complete and comprehensive series of articles cover all phases of magnetometer work and this new service is intended to supplement this former work and provide for the man in the field as well as for the office man late and reliable information concerning magnetic storms so that they may check the field observations as required.

Sample Telegram

The information will be printed in the form of a telegram as received from the United States Coast and Geodetic Survey, Tucson, Ariz., station and in a general way will read:

"Storm began twelfth twenty-one severe ended fifteenth fourteen," which means that a magnetic storm began on the 12th day of the month (February) at 21 o'clock. It was severe in intensity and ended on the 15th day at 14 o'clock, Greenwich mean time counted from midnight to midnight being used.

When a storm is of long duration the information will be carried in the form of two telegrams one giving the time of beginning and the other the time of ending of the storm. The above telegram refers to a storm that occurred during the week of February 10 and was of rather long duration as it continued from 9 p. m. mountain standard time Wednesday night, February 12, until 2 p. m. Saturday, February 15.

A. K. Ludy, resident observer at the Tucson station gives the following interesting description of the station and its instruments, also makes an interpretation of a magnetogram reproduced with this article.

Tucson Observatory

"The magnetic observatory of the United States Coast and Geodetic Survey at Tucson, Ariz., is located northeast of the city approximately 9 miles, a distance far enough to be free from the disturbing influences of the city. The observatory is located a thousand feet east of the house of the resident observer. The instruments being sensitive to temperature changes are housed in a constant temperature building constructed of wood with copper nails in such fashion that three air spaces and two sawdust layers completely surround the instruments. This protection gives the observatory a constant temperature changing slowly only with the seasons.

"The reader is referred to a publication of the United States Coast and Geodetic Survey: 'Directions for Magnetic Measurement' by Daniel L. Hazard, for a complete description of the theory involved, and the instruments used. This publication can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 15 cents.

"Only a brief resume will be presented which will, it is hoped, enable those interested in magnetic prospecting to make use of the magnetograms from the observatory.

Magnetic Field

"Figure 1 shows how the earth's magnetic field can be resolved into several components. Declination and dip are measured in degrees, and the lines are so drawn that their length is proportional to their respective intensity. When three of the components are known, the others may be easily found by solving the triangles.

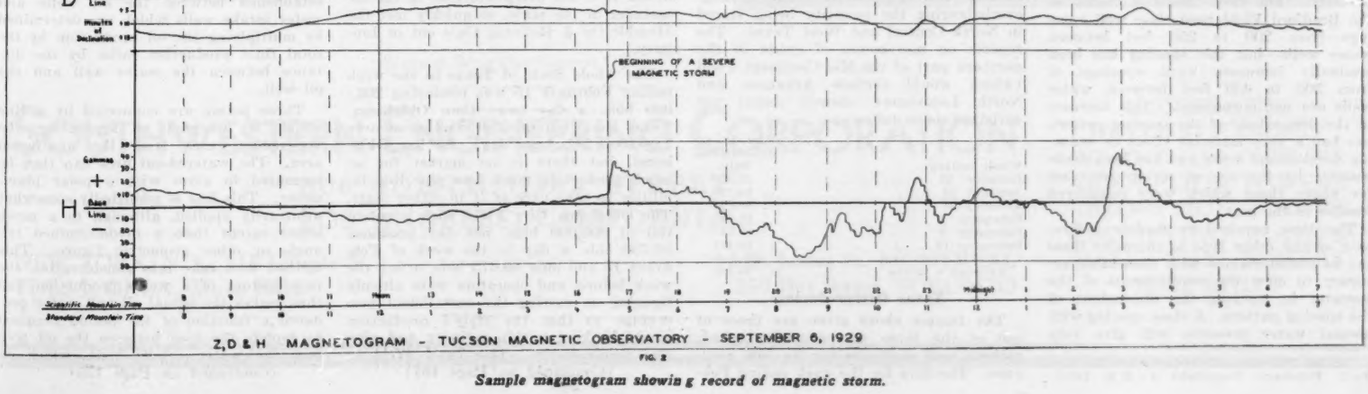
"The three components observed continuously at the Tucson observatory are: D (declination in degrees and minutes), H (horizontal intensity), and Z (vertical intensity). Intensity is measured in gammas, scale value being determined for each instrument once a month. Changes in the three components are recorded by three instruments inside the constant temperature observatory. Small magnets are used in the instruments so that, while they are set close together and all three record on one film, their influence on each other is negligible.

"The Z, D, and H instruments are set in line on the magnetic prime meridian (a line at right angle to magneto north) in the inner chamber of the observatory. Each instrument is free to move with the changes in its respective component of the earth's magnetic field, and the small magnet in each one moves a small mirror, which reflects a beam of light from an oil lamp to the film on the recording drum. The light from the lamp is cut once an hour by an accurate clock, which, by a break in the line, records the hours on the film.

Base Lines

"Each instrument has two mirrors, one stationary and one attached to the magnet and moving. The stationary mirror records as a straight line called a base line and the deviation of the moving line

(Continued on Page 119)



Sample magnetogram showing record of magnetic storm.

Bradford-Allegany's Great Future

Estimated That Flooding Will Recover 600,000,000 Bbls. of High Grade Oil From Two Fields in Next 50 Years

By Paul D. Torrey*

Much of the information previously published regarding the saturation and oil content of the Bradford sand has been very misleading. The detailed analyses of hundreds of cores of the sand combined with studies of the relation of the amount of water introduced into the sand, with the total fluid and gas produced, indicates that the average oil saturation of the Bradford sand is about 55 per cent. Higher saturations are occasionally found in lenses that are apparently unconnected with the main sand body, and in areas where oil has been concentrated in the sand by flooding action, saturations approaching 100 per cent are not uncommon. In general, the saturation of the sand is higher in structural lows than along anticlinal axes or in the Knapps Creek Dome. In fact, the upper part of the sand, in the higher parts of the folds, is almost invariably a gas pay and is barren of oil, which presents a rather serious problem in flooding operations since water will move much more readily through the depleted gas pays than through the saturated oil pay.

The results obtained from laboratory tests of oil saturation can be accepted as minimum figures for there is certainly some oil lost during the coring operation, but they can be readily checked by calculating the total volume of pore-space in the sand and comparing it with the amount of water introduced into the sand and the volume of fluid and gas produced from the oil wells. In Table No. 1 such a comparison has been made, based on accurately kept data from several properties, and it can be clearly seen that if the sand had possessed a saturation of from 80 to 85 per cent it would have been physically impossible to have put such volumes of water into the sand.

The determination of oil content is very essential, not only because it has an important bearing upon the spacing that can be most advantageously employed but because it is, in most cases, an accurate criterion of property value.

Characteristics of the reservoir rock such as the porosity and saturation of the sand are reasonably constant but, since these conditions cannot be controlled in advance, it is necessary to apply a spacing pattern which past experience has shown may be expected to give the most favorable results. The factors of water pressure and the element of time are controllable by the operator and must be considered in selecting the most advantageous spacing for sands possessing certain specific characteristics.

The use of additional water pressure was first tried in the Allegany County fields, where it was found that the natural hydrostatic pressure was not sufficient to force adequate volumes of water into the sand owing to its very low porosity. The first intensive floods in the Bradford Field used close well spacings—from 200 to 250 feet between water wells—but this spacing has been gradually increased until spacings of from 300 to 450 feet between water wells are not uncommon. This increase in the dimensions of the spacing pattern has had a very material effect in reducing development costs and has been made possible by the use of water pressures far above those which were considered feasible in the past.

The time required to deplete a five-spot or any other type of intensive flood can be predetermined with reasonable accuracy to meet the requirements of the operator by varying the dimensions of the spacing pattern. A close spacing with normal water pressure will give very rapid results and is frequently used where it is desired to make a rapid return of the capital invested in land and development, or to build up a large production for the purpose of a sale. A wide spacing pattern possesses not only the material advantage of lowering the cost of development but also the longer productive life of widely spaced floods permits a better opportunity for obtaining an average price for the oil produced. There has been a gradual but definite trend toward wider spacing patterns during the past year.

The description of the various factors upon which the selection of the most advantageous spacing pattern must be made leads to a definite analysis of these factors to determine the proper spacing for certain properties located in the central part of the Bradford Field. Analysis of this character cannot be reliable unless there is a close comparison between core studies and the results obtained from actual field operations. In fact, core analyses are practically worthless unless they can be interpreted in the light of past operating experiences. The most important feature in the construction of these graphs is in the calculation of an average porosity that is representative of the core. This is, of course, impossible where there are wide variations in porosity and any recommendation that might be made for sand of this character should be based more upon the experience of the engineer and the actual operating problem of the operator rather than upon any predetermined formula.

*Before Petroleum Division A.I.M.E., New York, February. Copyright A.I.M.E. 1930.

Flood No.	Vol. of Voids: in bbls. per A calculated from core analysis	Vol. of Oil in bbls. per A calculated from core analysis	Avg. Water pressure at top of sand in lbs. per sq. in.	Avg. porosity of sand
1	34,098	18,846	1,300	12.1%
2	27,664	15,400	1,300	11.7%
3	28,360	12,622	1,100	13.3%
4	20,455	11,840	1,500	11.2%
5	13,980	9,377	1,700	10.9%

Flood No.	Water Input in bbls. per A	Oil Produced in bbls. per A	Ratio Water input / Oil Produced	Time Flood Has Been in Operation
1	14,400	1,100	13.1	7 months
2	18,831	2,975	6.3	12 months
3	11,880	480	24.7	4 months
4	18,223	3,860	4.6	23 months
5	8,170	2,700	3.0	14 months

Table No. 1.—Relation of water input to oil produced for several properties in the Bradford and Allegany Fields.

	Time Flood Has Been In Operation	Area of 5-Spot	Total Oil Recovery from 5-Spot in Bbls.	Recovery Per Acre in Bbls.	Total Water Produced from 5-Spot in Bbls.	Water Prod. per Acre in Bbls.
First 5-Spot	23 months	1.43A	1,815.35	1,269.4	6,350.0	4,440.5
Delayed 5-Spot	12 months	2.06A	6,784.00	3,293.2	3,797.1	1,843.2

Table No. 2.—Comparative results of delayed five-spot and ordinary five-spot flood. Delayed drilling has already increased the oil recovery on this property 159 per cent and decreased the water production per acre 140 per cent in approximately one-half the operating time.

Recovery of Oil

Notwithstanding the certainty of developing oil production in the Bradford and Allegany fields, the recovery of oil by water flooding is a most variable factor, depending both upon the method of operation and upon the field content and character of the sand. There is unquestionable evidence that the recoveries obtained in the past from many properties are not a true indication of their worth, owing to a lack of adequate water supplies and to the fact that many intake wells were undoubtedly plugged by ferric hydroxide and suspended matter from the water. In addition, information obtained from cores taken in what is regarded as watered out areas indicates how really inefficient many of the old floods have been, for, in some instances, it has been found that not over 50 per cent of the sand has been affected by the water and only about 25 per cent of the sand has been effectively flooded. It may be reasonably expected that intensive developments will materially increase recoveries obtained in the past, perhaps from 20 to 25 per cent, since the possibility of by-passing oil is reduced, and the hazard of inadequate water supply almost entirely removed.

It is impossible to apply a recovery factor that can be used with a fair degree of certainty for the large combined areas of the Bradford and Allegany fields owing to the factors previously described. By comparing recoveries, previously obtained from systematic developments and the present and anticipated recoveries from intensive floods, with the oil content of the sand determined from core analysis, the writer has found that efficient water floods, in sands possessing a porosity of average uniformity, are recovering approximately 40 per cent of the oil obtained in the sand. This figure has been checked sufficiently to warrant its use in estimating the oil recovery from undeveloped properties, and, although indicated recoveries from core analyses cannot be offered as an absolute certainty, they are, at least, a valuable index of comparative quality.

The determination of the recovery from intensive floods is comparatively simple since the oil produced from each well is derived from a restricted and easily defined area. It is, however, sometimes difficult to calculate the recovery from unsystematic floods, since such floods are frequently so erratic that the use of fixed geometric figures to represent watered-out areas around each intake well cannot give reliable results.

The following method has been used with considerable success, although it cannot be applied with any certainty during the early life of a flood. Points are established between the oil wells and water intake wells which are determined by multiplying the oil production by the total fluid production ratio, by the distance between the water well and the oil well.

These points are connected by a line which is accepted as separating the watered-out area from the unaffected area. The watered-out area can then be measured in acres with a polar planimeter. This line is admittedly somewhat arbitrarily applied, although to a much lesser extent than a predetermined triangle or other geometric figure. This method does take into consideration the past history of a well's production and thus makes the actual oil and water produced a function of the period required to deplete the area between the oil well and the water intake well, which in

(Continued on Page 155)

SIDELIGHTS ON RECENT PRICE CUTS OF MID-CONTINENT CRUDE

By James McIntyre

When the price of all grades of crude oil produced in the Mid-Continent was finally lowered by all the purchasing companies on February 15, following the series of cuts that at first affected only a part of the Mid-Continent, crude oil was being withdrawn from storage in Kansas, Oklahoma and the Texas Panhandle and was being stored in North Central Texas, and to a small degree in West Texas.

In the week ending February 15 a net average of 26,476 bbls. per day was being drawn from stocks in the divisions mentioned, the withdrawals of Oklahoma, Kansas and Panhandle crude greatly overbalancing the quantity being stored in North Central and West Texas. The reports on movements of crude in the northern part of the Mid-Continent Field (which would exclude Arkansas and North Louisiana) showed recent net withdrawals as follows:

Week ending	Av. daily withdrawal bbls.
January 11	33,006
January 18	34,476
January 25	90,779
February 1	21,542
February 8	11,564
February 15	26,476
Average 6 weeks	36,307

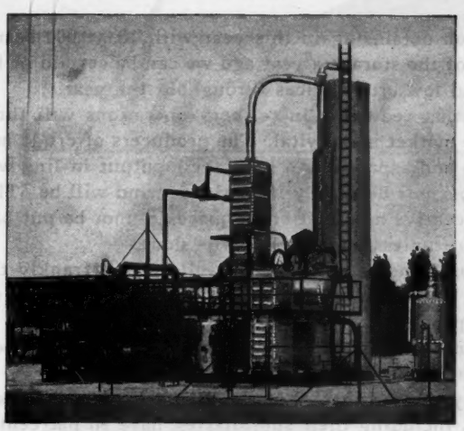
Texas Overproducing

The figures above given are those of one of the large oil companies which gathers such statistics for its own guidance. The data for the week ending February 15 indicate that Texas crude (outside of Gulf Coast and West Texas) was being overproduced by 20,124 bbls. per day, but in the Oklahoma-Kansas division oil was going out of storage at the rate of 46,000 bbls. per day.

Assuming the figures to be correct, it can be seen at once why 80 per cent of the oil purchasing power in the Oklahoma and Kansas fields were willing to maintain the crude oil prices established in May, 1929, while on the other hand, most of the purchasers of Texas crude, with a constantly growing production in the Gulf Coast and Southwest Texas in addition to a net overproduction in the remainder of the state, so quickly met the Humble Oil & Refining Co.'s cut in January.

The whole State of Texas in the week ending February 15 was producing 202,000 bbls. a day more than Oklahoma. Texas has a potential production of over 1,000,000 bbls. per day. So has Oklahoma, but there is no market for so much production much less pipe line facilities to take care of it in either state. The Oklahoma City Field with a potential of 800,000 bbls. per day produced 86,730 bbls. a day in the week of February 15 and only 69,675 bbls. a day the week before, and operators were already figuring on cutting the curtailment percentage so that the state's production would be kept within refinery and pipe line requirements. The Yates Field in

(Continued on Page 157)



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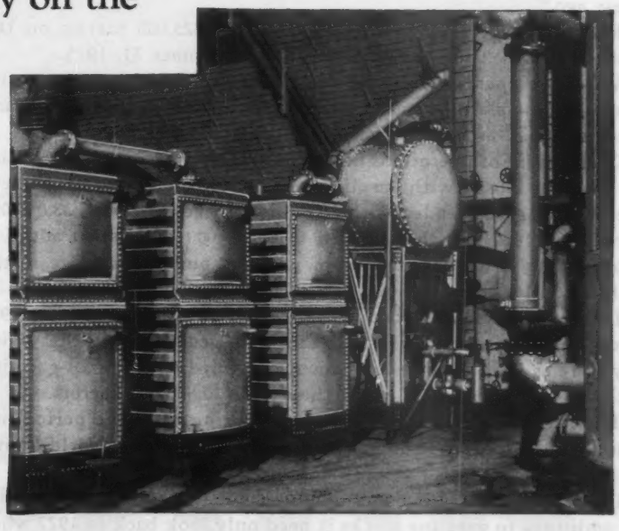

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GOOD YEAR, OR BAD?

Two months of the year have gone, but 1930 is not lost by any means.

It is still within the industry's power to make it a good year or bad. But every day wasted will increase the odds against us.

Everyone knows the crude situation. Gasoline stocks were 10,000,000 barrels larger on the first day of the year than they were a year ago.

Five years ago they had jumped from 30,823,000 barrels on December 31, 1924, to 38,875,000 barrels on December 31, 1925.

When we opened 1927 with 39,023,000 barrels in storage the industry became alarmed at the failure to reduce excessive stocks and prices slumped as distress gasoline flooded the market.

Curtailment of operations became a necessity rather than a choice and the year closed with gasoline stocks down to 33,316,000 barrels. The following year ended with a fractionally less storage, 33,049,000 barrels, but 1929 saw this swelled to 43,115,000 barrels, an addition of practically 10,000,000 barrels of gasoline put into storage in the twelve months.

In other words we produced an excess of gasoline during 1929 almost half as great as our total stocks on December 31, 1922, when they were 21,043,000 barrels, or about one-third of the total gasoline stocks at the end of 1924, when they were 30,823,000 barrels.

The inflation in Wall Street stocks during the same period had nothing on the inflation in gasoline stocks and all the world knows the result there.

If the oil industry has any doubts about the outcome of continued additions to gasoline stocks it need only look back to 1927 when the refinery market collapsed under the weight of accumulated stocks.

Fortunately there are several constructive factors at work today which, if properly correlated, can yet make 1930 a good year.

There is a better and wider understanding of the economic folly of overproduction, whether it be of crude or of motor fuel.

Experience is convincing a constantly enlarging number that the only remedy against overproduction is co-operation and that failure to co-operate brings a penalty that none can escape.

There should be no further accumulation now so that when the main consuming season opens stocks should not exceed what they were a year ago. Every effort should be made to keep them down to at least that figure.

One of the main factors in the low gasoline market last year was the fact that the refining industry maintained its runs at such a high point that it accumulated 15,000,000 barrels in the first three months of 1929, an increase of almost 50 per cent in stocks over the first of the year.

If this condition obtains again this year with 10,000,000 barrels already in excess of the storage a year ago we can be certain of low gasoline prices and low crude prices throughout the year.

The objection that reduction in refinery operations will throw more crude on the market is not vital. The producers of crude have shown an attitude and capability to keep their output in line with demand when they know definitely what the demand will be. They have the added incentive now that crude prices cannot be put back to where they were unless and until this is done.

As to the refining industry it may as well be said frankly that the old theory of "passing the buck" to the small refiner will not solve the present problem.

The major refining organizations occupy a more important position in the refining industry than they have ever done.

A recent survey showed that 20 major refining organizations in the United States, including their subsidiaries, have 80 per cent of the refinery capacity in the country.

The remaining 20 per cent comes from over 200 refining organizations, most of which are operating small plants.

Any reduction on the part of a large number of these small refining organizations would not have as much effect in substantial curtailment of overproduction as might be effected by one major refining organization alone.

These major organizations are the major part of the industry and have the major responsibility in any limitation program to keep production in balance with demand.

It is no secret in trade circles that expansion by some of the major units over the past year contributed more to the general demoralization of the gasoline market than the combined operations of all the smaller organizations.

This does not mean, of course, that the smaller units can avoid their share of responsibility or forget that they have probably more at stake than the major organizations which are integrated in their operations.

Whatever curtailment of overproduction is necessary must be done by the individual units. The problem is general; its effects universal, but the remedy must be found in the individual operating policy of each unit.

It is a plain open and shut proposition.

The industry naturally and rightly looks to the larger organizations for leadership in shaping the policies of the industry and for example in executing them. The situation is squarely up to each one of them for individual and immediate action.

With 10,000,000 barrels more gasoline in stock than a year ago and additions being made to it there can be no hope for a prosperous market in the main consuming season.

The situation is extremely doubtful in California where cheap crude is supplying gasoline in competition with the Gulf Coast and in the eastern markets.

It is a condition and not a theory that the industry faces today. The 10,000,000 barrels of excess stock and the daily additions to it are facts that must be met and the only way to meet them is by bringing down production so that stocks at the opening of the main consuming season will not be larger than they were a year ago.

The crude oil producers were told the same thing last April but were so slow in acting upon it that they found their market shot when they least expected it.

The refining industry has been warned in time. It is not yet too late to apply the brakes to production, but it must be done promptly and without waiting to see if the other fellow will do it first.

Those who act quickly will have least cause to regret it, whether the market is saved or collapses. In the one case they will have done their part in saving it and themselves and in the other they will have no excess distress products to get rid of in a demoralized market to their own loss and that of the industry at large.

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Simplified Cracking Unit Introduced

New Pressure Unit Being Licensed Under Donnelly Patents. Operates With Reduced Crude and No Reaction Chamber

By W. T. Ziegenhain

An advanced type of cracking unit, licensed under the Donnelly patents, has been recently introduced into the Mid-Continent at the refinery of the Illinois Oil Co. at Cushing, Okla., by the Smith Engineering Co. of Kansas City, Mo. This unit is unique in many respects, and, although operating less than three months, the results indicate the following features:

Topped crude is used as charging stock.

Requires low initial investment for a given production of gasoline.

No coke is produced by the process.

The intensity of cracking may be controlled.

May be operated over a wide range of pressures and temperatures.

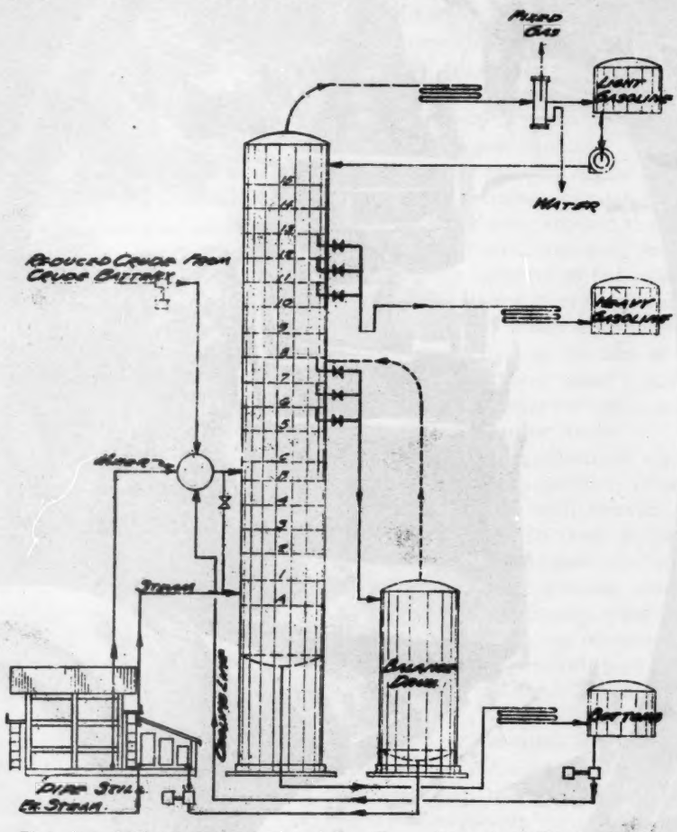
Only the pipe still and transfer line to the mixer is under high pressure.

The fuel oil residue is marketable direct from the unit.

Flow Chart

The flow chart shown here outlines the operation of the unit at the Illinois Oil Co.'s plant and the simplicity of the installation is readily apparent. In this case, the unit was designed to operate in conjunction with three shell stills which top the 34 to 35 gravity Cushing crude and reduce it to 24 gravity. The hot residue goes to the unit at about 725° F., the third still of the battery acting as a surge tank. At this temperature the oil enters a mixing device shaped like a tee where it comes in intimate contact with the oil and vapors from the cracking coils. The stream is under a pressure of about 650 pounds and at a temperature of about 920° F. as it enters the mixer.

At this temperature and with the still designed to permit sufficient time to accomplish the desired amount of cracking all of the cracking is intended to take place in the still and transfer line and the reaction is arrested or shock-chilled as the two streams meet in the mixer. From the mixer the oil passes directly into the 8'6"x48' insulated tower. This serves as a fractionator for the cracked vapors and as a reboiler, should there be sufficient heat available within the tower to distill off the gas oil in reducing the bottoms to the desired gravity. Superheated steam may be injected into the tower near the base to aid in distilling off the gas oil and is superheated in a short coil within the economizer section of the pipe still. The oil enters the tower at 810° F. The pressure on the still outlet is reduced through the mixer by a specially designed expansion and mixing valve.



Flow chart showing general operation of Donnelly cracking unit at Illinois Oil Co.'s plant using reduced crude as charging stock.

Tower

The tower is operated without pressure except that required to cause the flow of the vapors and gases through the system.

Eleven trays of the bubble caps are located in the upper portion of the tower to fractionate the vapors. This section performs a double duty. It fractionates the overhead pressure distillate to the desired endpoint and also segregates the gas oil as a side stream.

In the lower portion of the tower are four bubble cap trays to help in the fractionation of the gas oil. In addition, special trays are located in the tower at the point where the hot stream enters from the mixer.

The quality of the overhead pressure distillate is controlled by returning a portion of the condensed overhead stock as done in common practice. Several plates have been tapped along the side of the tower near its midsection as may be seen in the flow chart. This permits a choice of several points from which to draw off the gas oil. The tower is also equipped with draw-off lines from several trays higher up in the tower, should it be desirable to take off a furnace oil distillate.

Off the base of the tower, an 8 to 9 gravity fuel oil is continuously withdrawn at about 680° F. through cooling coils and goes to storage at about 150° F. There is not a sufficient volume of this fuel to warrant the economic use of a heat exchanger.

Accumulator Drum

The accumulator drum or balance drum is simply a well-insulated surge tank where the distilled composite gas oil accumulates and from this tank the composite gas oil is withdrawn and charged through the cracking zone to complete the cycle as briefly explained in the previous paragraphs. The cracking stock in the accumulator is maintained at about 18 gravity, further emphasizing the completeness of the reduction of the residuum.

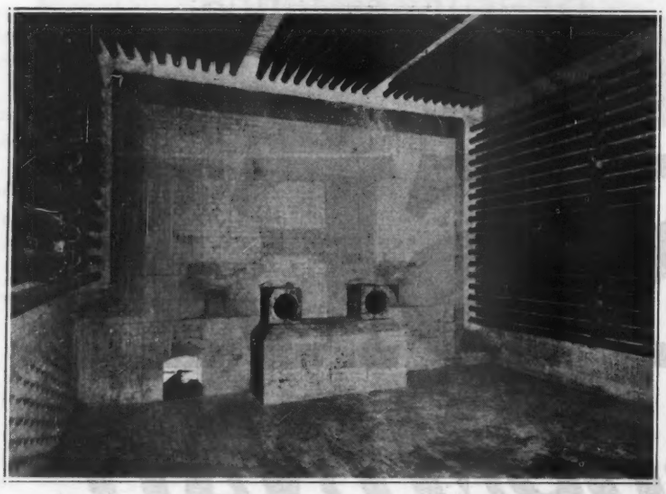
A Wilson-Snyder compound twin simplex hot oil pump with water-cooled pistons takes the hot gas oil at about 580° F. to the cracking coils against an outlet pressure on the pipe still of about 650 pounds. A vapor line from the accumulator tank to the tower equalizes the pressure in the system.

Pipe Still

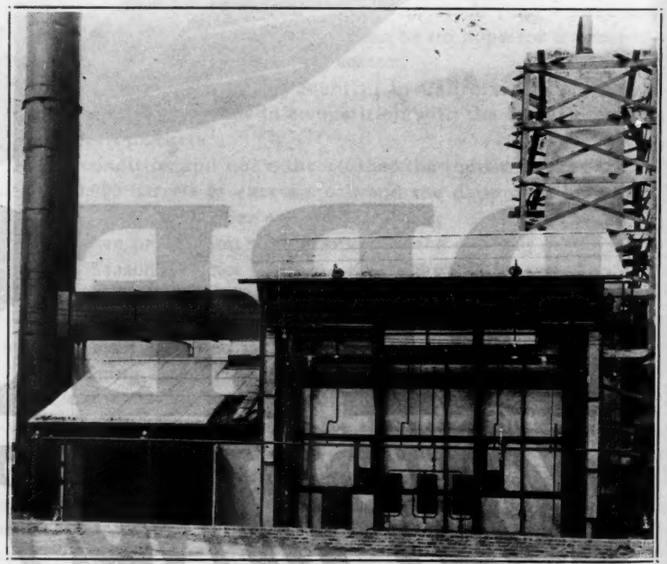
The design of the pipe still is of particular interest. It is essentially divided into two sections, an economizer section filled with tubes heated by convection, and the main section, containing wall tubes and ceiling tubes, all of which are heated by radiation.

The accompanying picture shows an interior view of the furnace and shows

(Continued on Page 120)



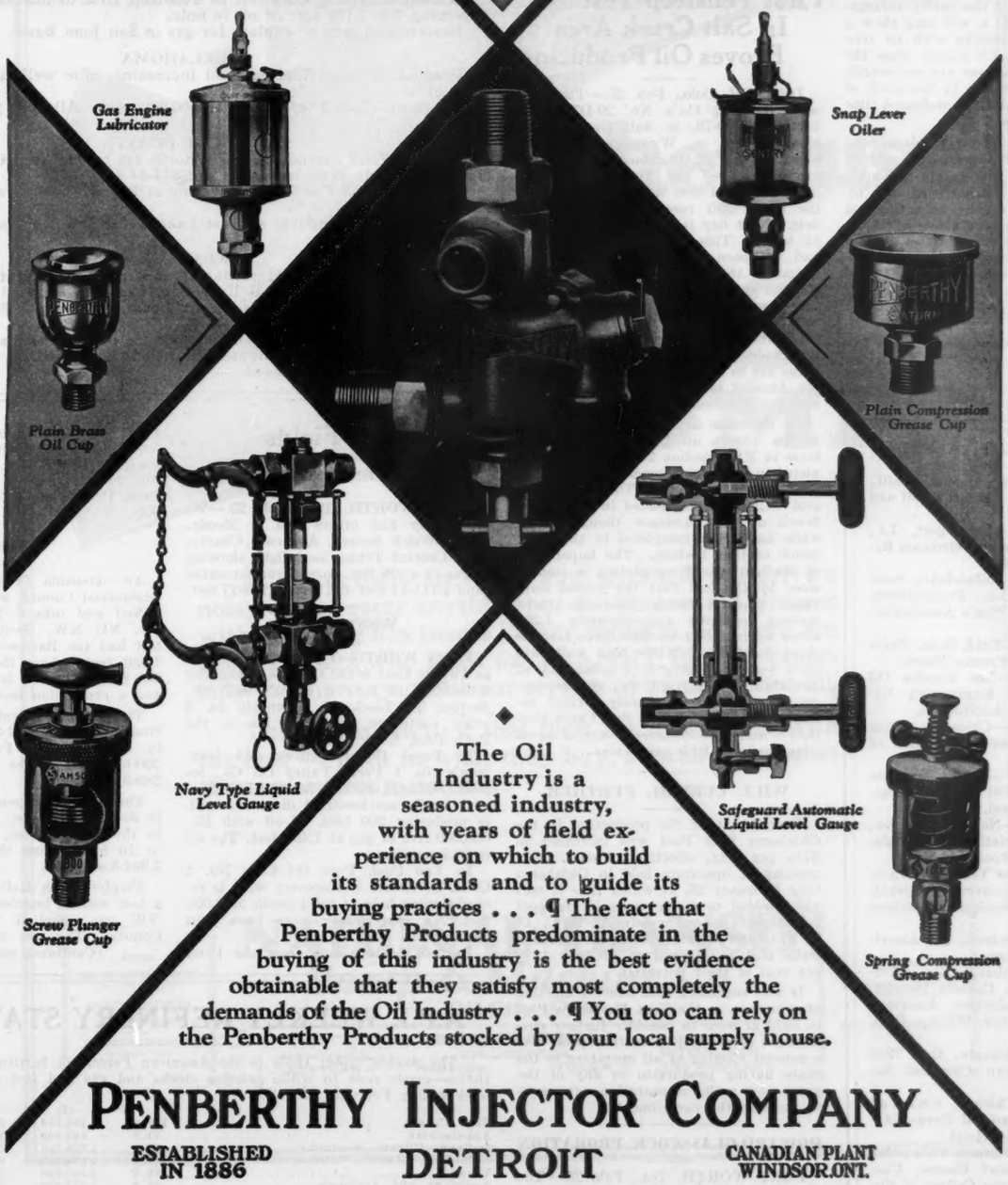
Interior of radiant section of tube still. The furnace is fired from the two ends and the hot gases pass through a checker work of brick and into the preheater or convection heating bank at one side. Note the comparatively large firebox which minimizes local heating and the formation of coke.



General view of tube still used on Donnelly cracking unit at Illinois Oil Co.'s plant. The tower is shown in the background before the scaffolding was removed.

PENBERTHY PRODUCTS

PREDOMINATE


Gas Engine Lubricator
Snap Lever Oiler
Plain Brass Oil Cup
Plain Compression Grease Cup
Navy Type Liquid Level Gauge
Safeguard Automatic Liquid Level Gauge
Screw Plunger Grease Cup
Spring Compression Grease Cup

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ANALYZING RATE OF PRODUCTION IN VERY DEEP OIL AND GAS WELLS

By Roswell H. Johnson
Pittsburgh, Pa.*

The fact that the very deep well No. 1-B at Big Lake, Tex., increased its production for several months after completion and has so far shown no decline has attracted attention and led to some speculation as to its cause. Professor Sellards and others have suggested that it is due to "blowing itself in"; i.e. an enlargement of hole in the sand. It seems to me that this explanation is not only adequate but necessary.

The purpose of this note is to go a step farther and predict that all very high-pressure wells, and therefore all or nearly all very deep producing wells, will have the same experience. It follows that at some intermediate depth there may be an approach to equilibrium between the pressure decline and the cavity enlargement factors, so that a well may show a history of several months with no very large gain or loss. Of course, since the shapes of the two curves are necessarily different, an equilibrium in the sense of no variation in yield for a prolonged time is not to be expected.

There is another factor in enlargement of the hole—the resistance of the rock to this erosion is a variable also. Therefore the extent to which a well may increase its yield naturally is a function not only of the pressure above a "threshold" adequate to erode but also a function of the resistance of the rock to erosion. This is, of course, a well known phenomenon in California where wells may increase their yield even though not very deep.

The two factors then, point to the following well-erosion law: "For any given resistance to erosion of an oil or gas reservoir rock, there is a depth below which the initial pressure is great enough to produce erosion. This erosion continues as long as the pressure exceeds the requirement and as a result for that period decreases the rate of decline of the well. Below another and greater depth the influence of the erosion exceeds th influence of the decline of pressure and the well increases in yield until the equilibrium is reached by the decreasing erosion.

It follows from (a) the well-erosion law, (b) the greater extractability at

(Continued on Page 160)

*Before A.I.M.E., New York, February meeting. Copyright A.I.M.E. 1930.

THE OIL MAN'S CALENDAR

March 6—Los Angeles, Calif., annual meeting, California Oil and Gas Association.

March 10-12—Shreveport, La., convention, Western Petroleum Refiners Association.

March 11-12—Philadelphia, semiannual convention, Pennsylvania Independent Oil Men's Association, Elks Hotel.

March 12-14—Enid, Okla., Farm Machinery and Tractor Show.

March 13-26—Los Angeles Oil Equipment and Engineering Exposition, Shrine Auditorium.

March 17-18—Chicago, spring meeting, Independent Oil Men of America.

March 19-21—Detroit, convention, Michigan Oil Men's Association, Statler Hotel.

March 20-22—New Orleans, La., American Association of Petroleum Geologists, Roosevelt Hotel.

April 5-9—New York and Washington, 50th anniversary celebration, American Society of Mechanical Engineers.

April 5-13—Detroit, All American Aircraft Show.

April 7—Pittsburgh, Pa., meeting and election, Eastern District, Division of Production, American Petroleum Institute, William Penn Hotel.

April 7-11—Atlanta, Ga., 79th meeting, American Chemical Society.

April 7-12—Chicago, annual meeting, American Oil Burner Association, Stevens Hotel.

April 15-17—Norman, Okla., Gas Measurement Short Course, University of Oklahoma College of Engineering.

April 24-25—Cleveland, Ohio, semiannual meeting, National Petroleum Association.

May 5-8—New Orleans, Western Natural Gas Convention.

First Tensleep Test In Salt Creek Area Proves Oil Producing

DENVER, Colo., Feb. 25.—The Midwest Refining Co.'s No. 29-DT, NW, Section 35-40-79, in Salt Creek Field, being drilled on Wyoming Associated lease to test all horizons down to the granite, topped the Tensleep sand at 3,078 feet and was drilled 15 feet into the sand. Oil rose 1,100 feet in the hole. Next day it swabbed 472 bbls. in 12 hours. This sand, which heretofore had not been tested in Salt Creek, is estimated to be around 300 feet thick. Control head has been installed and coring deeper into the sand cautiously will begin in a day or two. The oil is black and tested 26 gravity, a little better grade than was expected. Present plans are to continue to the granite with the Amsden sand expected at 4,075 feet and the Madison at 4,260 feet.

On the same day this well was drilled in No. 13-SD, on Wyoming Associated lease in NW, Section 26-40-79, was completed in the second Sundance and flowed 471 bbls. in 15 hours. This is the biggest well so far completed in the second bench of the Sundance though larger wells have been completed in the third bench of that horizon. The importance of the last named completion is emphasized by the fact that the second Sundance pool is larger than the third horizon, covering approximately 1,200 acres against 500 to 600 acres for the third Sundance. While both wells are on a lease belonging to a subsidiary of Mountain Producers Corp., the acreage on the structure is equally divided between that company and Salt Creek Producers and both discoveries are of equal importance to both companies.

WILL CURTAIL FURTHER

Curtailment of the production in the Oklahoma City Pool was increased to 87½ per cent, effective at once, at a meeting of operators held in Oklahoma City February 25, at which time it was also decided to divide wells in the pool into eight classes, namely A, B, C, D, E, F, G and H. These different groups of wells will be allowed to produce 12½ per cent of their potential.

It was suggested that another meeting of operators in the East Earlsboro Pool be held at once to consider further curtailment of production in that pool, also a general meeting of all operators in the State having production in any of the areas now under a proration agreement to increase the curtailment.

HOWARD-GLASSCOCK PRORATION

FORT WORTH, Tex., Feb. 25.—The advisory committee of the operators in the Howard-Glasscock Pools met at the Baker Hotel, Dallas, to discuss further proration of those pools with the proration percentage sure of being extended for another six months. H. E. Andrews, proration umpire of the fields, presented his report.

High Spots in Field News

SOUTHWEST TEXAS

Gulf company completes well in Darst Creek Field which flows 9,000 bbls.

NORTH LOUISIANA-ARKANSAS

Carterville area has 1,000-bbl. well. Good gas showing in Mississippi drowned by water. Good gassers in Louisiana.

NORTH TEXAS AND PANHANDLE

Rank wildcat producer in Carson County, 11 miles from nearest production, has initial output of 2,165 bbls. First good well south of granite ridge.

KANSAS

Clark Pool, Greenwood County, extended. New wildcat location in Russell County.

Rice Pool to be curtailed.

CALIFORNIA

Santa Fe Springs on downward trend, may cease to be dominant within six weeks.

Curtailment plan submitted to field groups. Situation still critical.

ROCKY MOUNTAIN AREA

Midwest Refining Co.'s test to Tensleep, first to that sand in Salt Creek, Wyoming, has 1,100 feet of oil in hole.

Eastern company to explore for gas in San Juan Basin.

OKLAHOMA

Production from Konawa Pool increasing, nine wells making a total of 7,330 bbls.

Oklahoma City Pool potential 800,000 bbls. Allowed production 88,510 bbls.

GULF COAST

Refugio Field extended 2 miles northeast by Houston Gulf Gas Co. well flowing 300 bbls. from new sand at 5,879-84 feet.

Fourth well of The Texas Company at Port Neches, Orange County, estimated 2,000 bbls.

Another good producer at Lost Lake Dome and deep sand found at Lake Pelto.

WEST TEXAS

New deepest cable tool producing well in the world at Big Lake where Group No. 1 Corp.'s No. 1-B University has been eclipsed by No. 3-C University which flowed 36 bbls. in six hours, total depth 8,540 feet, 15 feet deeper than No. 1-B.

Ector County is the present big feature of the Permian Basin and proration may be necessary. Eighteen locations being drilled.

Yates proration unchanged.

Late Fields

EAST CENTRAL TEXAS

FORT WORTH, Tex., Feb. 25.—W. H. Roeser and others' No. 1 Moody, James Welch Survey, Anderson County, East Central Texas, has slight showing of gas at 4,108 feet, cored light saturated sand 4,111-14 feet and from 4,114-17 feet.

WEST TEXAS

FORT WORTH, Tex., Feb. 25.—Texas Pacific Coal & Oil Co. has announced a location in the SE cor. N half SE, Section 28, Block 45, Township 2s, 2 miles northwest of production in the Penn Pool, Ector County.

In Pecos County—Black and Dittman's No. 1 Pecos Valley Oil Co., located SE half, Section 34, H.&T.C. Survey, 1 mile northwest of discovery well, is producing 200 bbls. of oil with 15,000,000 feet of gas at 1,498 feet. The oil is 33.3 gravity.

In Van Pool, Pure Oil Co.'s No. 1 Crim, northwest of discovery well, is reconditioning hole at total depth of 3,001 feet. No appreciable shows have been encountered.

Burford's 4-inch line from the Penn Pool, Ector County, to Hendricks, Winkler County, has been completed and is ready to test. There is one booster station on this line 8 miles northwest of Penn Pool. The line's capacity is 5,000 bbls.

KANSAS

An extension to the Clark Pool in Greenwood County, was drilled by G. F. O'Neil and others' No. 1 Brinn, NW cor. NE NW, Section 34-22-11. The test had the Bartlesville sand at 1,876-1,930 feet, where the oil rose in hole 600 feet. The test is to be given a shot and a production test made.

The Vickers Petroleum Corp.'s No. 1 Binger in Section 21-20-10w, Rice County, in the Schurr Pool, is estimated a 200-bbl. well in the Schurr sand at 3,289-91 feet.

The Texas Company's No. 1 Stuckey, in Section 10-21-3w, McPherson County, in the Voshell Pool, swabbed 850 bbls. in 16 hours from the Wilcox sand at 3,384-3,401 feet.

Empire Oil & Refining Co. announces a new wildcat location for No. 1 Dillner, NW cor., Section 36-13-15w, Russell County. The test is 4 miles west of

(Continued on Page 160)

A.P.I. WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks—for the week ending February 22 follows:

	(1)	(2)	(3)	(4)
East Coast	100.0	3,165,300	8,409,000	6,244,000
Appalachian	91.0	560,000	1,656,000	654,000
Indiana, Illinois, Kentucky	98.6	1,928,300	7,601,000	2,960,000
Oklahoma, Kansas, Missouri	89.1	1,979,800	4,650,000	3,104,000
Texas	90.3	4,203,900	7,853,000	12,107,000
Louisiana and Arkansas	96.8	1,259,200	2,772,000	1,401,000
Rocky Mountain	93.6	401,100	2,331,000	1,036,000
California	96.3	4,010,600	15,798,000	109,402,000
Total United States	94.7	17,508,200	51,570,000	136,908,000
Texas Gulf Coast	99.4	3,218,700	6,768,000	9,479,000
Louisiana Gulf Coast	100.0	814,400	2,440,000	1,401,000

(1) Per cent refinery capacity represented. (2) Crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.

Why they use TRANSIT HOT OIL PUMPS

JUST as there are many men who will not drive a noisy car, or carry anything but the best watch, or hunt with anything less than a Parker shotgun, so there are many refiners who insist on TRANSIT PUMPS especially for the very particular service of pumping hot oil.

These men see to it that they are indentified with the best - - both in what they buy, as well as in what they manufacture and sell.

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REPUBLIC SUPPLY COMPANY
of California
Los Angeles, California
E. L. WILSON HARDWARE CO.
Beaumont, Texas

NATIONAL TRANSIT
Pump & Machine Co.
Oil City, Pa.

DISTRICT OFFICES
NEW YORK PHILADELPHIA PITTSBURGH
CLEVELAND HOUSTON TULSA LOS ANGELES

Agents
F. C. RICHMOND MACHINERY CO.
Salt Lake City, Utah.
REEVES & SKINNER MACHINERY CO.
St. Louis, Mo.

Okla. City Potential 800,000 Barrels

Allowed Production 88,510 Bbls. State Output Increases 14,000 Bbls. Over Last Week

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

Production in Oklahoma increased to 646,000 bbls. per day the past week, a gain of over 14,000 bbls. a day compared with the production of the week before. It is expected that the next weekly report will show a decline, although it may be slight. Last week's increase was divided between the Seminole area and Oklahoma City.

The high spots in the week's round up of field news boiled down to a paragraph, were as follows: Wirt Franklin's Lowery lease in the Oklahoma City Field made a new high during the week. Pandem Oil Co. purchased a half interest in a block of 3,400 acres and a wildcat test in Section 17-12-4w, northwest of the production in the Oklahoma City Pool. A wildcat test east of the pool was showing oil. Another test is due to be completed on the lease on which the largest completed well in the State was brought in. Indian Territory Illuminating Oil Co. has acquired the holdings of the Sooner Oil & Gas Co. in Section 10-11-3w, Oklahoma County, immediately west of the production in the pool. Another well in the Oklahoma City Pool has reached the 1,000,000-bbl. recovery mark. A new wildcat producer is reported in Township 8-4, Pottawatomie County. The Konawa area has become one of the most active in the Seminole district. New wells in the East Little River Pool were showing water in the Cromwell sand. A new wildcat, 4 miles south of the Sasakwa Pool was making 100 bbls. a day from a shallow sand. Oil was found in an old gas well in the Sayre district, in Beckham County. The Palacine area in Stephens County is showing an increase in oil production as the gas output of wells decline.

Oklahoma City's Rising Potential

The estimated potential production of the Oklahoma City Pool on February 22 was 800,000 bbls. from 102 completed wells, of which 37 were shut in altogether. At the same time the field had 195 operations divided as follows: 71 tests drilling below 6,000 feet, 41 tests below 5,000 feet, 25 tests below 4,000 feet, 43 drilling less than 4,000 feet, 4 rigs and 9 locations.

The Indian Territory Illuminating Oil Co.'s No. 1 Unsell-Krager, NE cor. Section 23-11-3w, was testing for production. The test was bailed down several days ago and failed to flow. The owners decided to deepen the test. Two bridges were drilled out and a production test is expected to be made before it is deepened. The test is in sand at a total depth of 6,380 feet.

Production is increasing on the Wirt Franklin Petroleum Corp.'s Lowery lease, on the north side of the pool. The total production on the lease February 19 was 25,704 bbls. from three wells. The No. 4 Lowery, in Section 12-11-3w, made 5,203 bbls. in 15 hours pinched. No. 2 Lowery, in the same section, flowed 16,601 bbls., and No. 3 Lowery, in Section 12-11-3w, made 3,980 bbls. Indian Territory Illuminating Oil Co.'s No. 1 L. Trosper, NW cor. SW NW Section 12-11-3w, was completed in Simpson sand at 6,360-77 feet. The well flowed 4,080 bbls. the first 24 hours. Another well completed during the week was the same company's No. 1 C. Brokaw, SE cor. NE Section 13-11-3w. It blew in making 1,318 bbls. the first hour, and 7,018 bbls. in five hours, when it was shut in.

The Coline Oil Co.'s No. 1 Warren, SW cor. Section 18-11-2w, was opened for a production test during the week and made 23,501 bbls. of oil and no water in 21 hours. On former production tests the well was showing water.

The Pandem Oil Corp. of Wichita Falls, Tex., has purchased a half interest in the drilling well and all acreage of the J. F. Cuniff test on the St. Joseph Orphanage block in and around Section 17-12-4w, Oklahoma County, which consists of approximately 3,400 acres.

The Indian Territory Illuminating Oil Co.'s No. 1 A. Brokaw, NW cor NE Section 13-11-3w, blew in during the week and bridged after being open for about an hour. The well showed considerable oil which sprayed around the rig before the test was shut in. The total depth of the well was 6,437 feet. It will be given a production test in a few days.

The wildcat test of the Mid-Kansas Oil & Gas Co., No. 1 C. E. Trosper, SE cor. NE SE Section 24-12-2w, east of the Oklahoma City Pool, encountered a showing of oil at 6,101-04 feet, and was drilling deeper. The discovery well, which is a half mile north and east, is producing from a sand at 6,157-60 feet, after being plugged back from a total depth of 6,904 feet.

On the southeast edge of the field Tom Slick Oil Co. and others' No. 1 Hussman, SW cor. NW SW Section 29-11-2w, has completed the fishing job and was drilling ahead at 6,228 feet.

Indian Territory Illuminating Oil Co.'s No. 1 Thomas-Fuzzell, SE cor., Section 13-11-3w, was drilling at 6,485 feet with a showing of oil. It is drilling again after the last string of casing was landed and the cement plugs drilled and it is expected to be completed in a few days. The test is the east offset location to the largest well completed in Oklahoma.

The Sooner Development Co.'s holdings in the NW Section 23-11-3w, was transferred to the Indian Territory Illuminating Oil Co. during the week. A location was staked in the SE cor. NW, Section 23-11-3w, but the test was never started. Since the development in the pool has extended in that direction a test may be drilled in the near future. However, the development of the acreage depends on the outcome of the Hall & Briscoe's No. 1 Holmes, in Section 10-11-3w, which is drilling around 4,750 feet after a fishing job.

Two other wells were added to the east side of the pool during the week. Prairie Oil & Gas Co. and others' No. 6 Hiddleston, SE cor. SW SE, Section 19-11-2w, blew in making 285 bbls. of oil in 25 minutes and was then shut in. Trouble developed with the connections. The total depth of the wells was 6,500 feet in Arbuckle lime. Same company's No. 7 Hiddleston, NE cor. SW SE, Section 19-11-2w, also blew in and flowed 310 bbls. the first hour, and 5,685 bbls. in 20 hours. The gas volume was estimated at 15,000,000 feet. The well was producing from the Arbuckle lime at a total depth of 6,485 feet.

An important well in the Oklahoma City Pool has a showing of oil. Tom Slick Oil Co.'s No. 1 Hoopes, NW cor. SW NE, Section 31-11-2w, cored a sand at 6,412-22 feet, with oil. The sand was found from 6,398-6,424 feet. It will extend the production in the pool a quarter mile south and is the most southerly test in the area to make oil.

Another important well in the pool is the Indian Territory Illuminating Oil Co.'s No. 1 S. Peterson, NE cor. SW, Section 25-11-3w. The well was a small producer and was making 1,450 bbls. before being drilled 2 feet deeper in the Simpson sand. The well made 2,490 bbls. the next 24 hours, from a total depth of 6,497 feet. The owners may deepen it again. Same firm completed its No. 5 Trosper, SE cor. NE SW, Section 13-11-3w. The well made 167 bbls. in 24 hours from the pay horizon at 6,308-25 feet. The total depth was 6,530 feet.

Coline Oil Co.'s No. 6, NE cor. NW NW, Section 24-11-3w, made 1,117 bbls. in 12 hours from the Simpson sand at 6,432-65 feet. The gas volume was estimated to be 15,000,000 feet.

A Consistent Producer

One of the most consistent producers in the Oklahoma City Pool in the Indian Territory Illuminating Oil Co.'s No. 1 M. Fuzzell, SW cor. NW, Section 19-11-2w, which has produced approximately 1,114,000 bbls. of oil to date since its completion on September 6, 1929. The well is still averaging around 14,000 bbls. a day when on production and showing no water. The well is producing from the Arbuckle lime at a total depth of 6,521 feet. It is the second well in the pool to produce over 1,000,000 bbls. of oil. The other is the discovery well owned by the same company which reached the 1,000,000-bbl. mark after producing 11 months.

Skelly Oil Co.'s No. 1 Hoopes, NW cor. NE, Section 31-11-2w, was opened for production and made 24,763 bbls. in 23 hours and 45 minutes. It is the largest Simpson sand producer in the pool to date.

Indian Territory Illuminating Oil Co.'s No. 1 S. Bodine, NW cor., Section 30-11-2w, is cleaning out at a total depth of 6,626 feet. The well has refused to flow and has been dead for more than 30 days.

Shell Petroleum Corp.'s No. 5 Petty, NW cor. SW NE, Section 30-11-2w, was plugged back to 6,250 feet and bailed down with water showing. The old total depth was 6,504 feet.

Shut-in Production

The initial production of the shut-in wells in the Oklahoma City Pool that have been allowed to produce for 24 hours or less was 377,735 bbls. Some new wells were added to the list during the week. The initial production of each well and the approximate date each well will be opened follows:

Company, lease—	Well No.	Bbls.	Date
Coline:			
Warren	1	24,746	2-26-30
Warren	5	5,325	3-25-30
Cromwell:			
Trosper Park	*11	9,600	3- 2-30
Trosper Park	*2	16,225	4- 6-30
Trosper Park	*9	11,077	4-15-30
I. T. I. Co.:			
Jennings	1	24,972	2-25-30
Jennings	3	18,307	2-28-30
Peterson	*1	1,025	3- 7-30
N. Emerson	*2	2,750	3- 3-30
Fortson-Farley	1	8,995	3-11-30
Canfield-Button	1	15,675	3- 3-30
L. Farley	1	30,438	3-12-30
Drake	*2	8,780	3- 1-30
Watters	*3	2,904	None
G. Button	3	11,118	3-24-30
A. Bodine	5	19,672	3-25-30
Trosper	*8	3,594	3-18-30
Trosper	*10	16,136	3-30-30
Farley-Fuzzell	1	†28,800	4-24-30
Bodine	3	8,442	3- 5-30
Button	4	6,996	3-30-30
Trosper	9	3,538	3-21-30
A. Brokaw	2	4,599	3-24-30
Trosper	*6	1,925	3-26-30
Fortson	3	19,239	4- 5-30
Drake	*1	4,631	4-18-30
A. Bodine	4	7,200	3- 5-30
L. Trosper	1	4,080	4-23-30
A. Brokaw	1	‡7,018	4-24-30
Hiddleston	1	‖1,525	4-24-30
Jones	*1	§3,792	4-24-30
Shell:			
Petty	6	3,444	2-26-30
Petty	7	1,197	2-27-30
Franklin:			
Lowery	*3	11,908	4- 4-30
Prairie:			
Hiddleston	6	14,000	4-21-30
Hiddleston	7	¶5,685	4-22-30
W. Franklin:			
Lowery	*4	8,376	4-23-30

*Wells producing from the Simpson sand. All others are producing from the Arbuckle lime.
†Estimated.
‡5 hours. §13½ hours. ‖15 hours. ¶20 hours.

In the Greater Seminole Area

The new wildcat test of Keister & Manning's No. 1 Rowlett, SE cor. SW NE Section 30-8-4, south of Tecumseh, in Pottawatomie County, has landed the 6-inch casing. The well flowed 420 bbls. in 24 hours from pay at 4,465-81 feet. Plans are under way to curtail drilling operations in the area.

The Konawa area is more active. The

(Continued on Page 78)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Bros.' No. 1 Forbes, SE cor. NW NW, Sec. 12-27-11w	Shut down 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rigging up standard tools 4,660 ft.

BECKHAM COUNTY

Kay and others' No. 1 Martin, C E half E half NW Sec. 32-8-24w	Drlg. 2,825 ft.
Producers Exploration Co.'s No. 1 Seidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson and others' No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Shut down 1,575 ft.

BLAINE COUNTY

Lowen and others' No. 1 Unknown, NW cor. SW NW Sec. 27-16-11w	Spudded and shut down.
Washoma Oil Co. and others' No. 1 Phillips, C NW SW Sec. 12-19-10w	Shut down 2,935 ft.

CADDO COUNTY

Abernathy & Brown's No. 1 Horton, SE cor. Sec. 8-6-13w	Drlg. 596 ft.
W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CLEVELAND COUNTY

Harris et al's No. 1 Highbee, SE NW Sec. 20-6-1	Drlg. 2,160 ft.
Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.
Phillips Pet. and T. B. Slick's No. 1 Sudick, NE cor. NE Sec. 8-10-2w	Wilcox 7,716-20 ft.; water; plugging back.

COAL COUNTY

W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Shut down 1,235 ft.

COMANCHE COUNTY

Pelwine Oil's No. 1 Howe, C SE SW Sec. 33-1-9w	Rig.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	Shut down 150 ft.
Green and others' No. 1 Wilson, C NE SW Sec. 14-1-12w	Shut down 4,055 ft.

GARFIELD COUNTY

Shell Petroleum Corp.'s No. 1 Loomis, C NW NW Sec. 32-23-4w	Drlg. 1,711 ft.
Continental and Barnsdall's No. 1 Brown, CNL SW Sec. 10-20-4w	10,000,000 ft. gas 5,095-5,100 ft.
E. L. Love and others' No. 1 White, SE cor. NW Sec. 9-24-6w	Shut down 5,566 ft.

(Continued on Page 169)

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Chicago, Illinois

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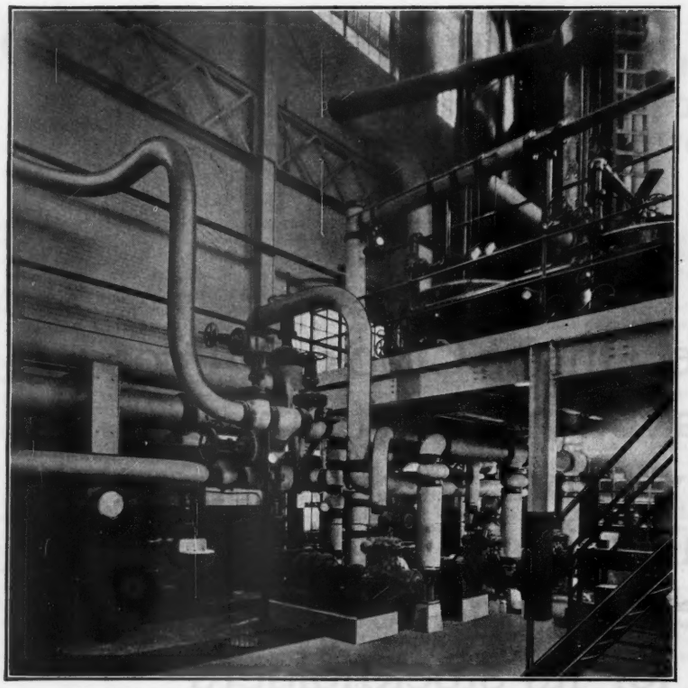

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VALVES • WELDED PIPING • FITTINGS

Curtailing New Rice County Pool

Only One Well Will Be Started Up to April 1. Voshell Pool Held to 3,000 Bbls. Slow Week in Field

By W. A. Spinney
Staff Correspondent, Kansas Fields

Production will be prorated and only one drilling well started in the Schurr Pool in the Raymond district of Rice County until April 1, under the new agreement by all operators in the area. The Voshell Pool in McPherson County is now producing 3,000 bbls. a day under a 25 per cent proration plan. Production was extended a quarter mile southeast in the pool during the week. A new wildcat test was announced in the southwestern part of the State in Stanton County, the first ever drilled in that county. Harvey County is being tested for oil production near the discovery gas well in the Halstead area. The second producing well was completed in the Curry Pool, a few miles west of Wichita, in Sedgwick County.

The possibilities of developing a major pool in the Raymond district in Rice County have been delayed. Another meeting of operators was held last Friday in Wichita, which included all the operators owning leases within a mile of the discovery well. Within the restricted area no tests will be started except the Allison-Fitzwilliam Corp.'s No. 1 well, location of which was staked last week. All the producing wells in the area are to be pinched to 50 bbls. a day. Another meeting is expected to be held late in March to consider new proration and drilling agreements which will be applied to the area after April 1.

The Shurr Pool proration committee, which was made permanent, includes D. P. Hearvey, Producers & Refiners Corp.; J. Vickers, Vickers Petroleum Corp., and F. Lockhart, Slick, Pryor & Lockhart.

The completed wells in the pool are estimated to be capable of producing from 1,000 bbls. to 1,500 bbls. a day. The discovery well, which was drilled deeper, has the Silicious lime at 3,304-07 feet, and was swabbing 45 bbls. an hour. Independent Oil & Gas Co.'s No. 1 was drilled deeper 9 feet, and swabbed 288 bbls. in nine hours, from the Silicious lime at 3,330-3,339 feet. Vickers Petroleum Corp.'s No. 1 Binger has landed the 6-inch casing at 3,274 feet. The Silicious pay was encountered at 3,289-91 feet, oil rose in the hole 800 feet in 30 minutes. It will be drilled deeper. Producers & Refiners Corp.'s No. 1 was pumping 50 bbls. a day.

Some geologists are comparing the new Shurr Pool in Rice County to the El Dorado Pool in Butler County. After examining logs in the new pool, practically the same condition exists in both areas. The new pool is located on the Ellsworth arch, which is a granite ridge, similar to the Nemaha arch in the El Dorado Pool.

Wells completed in the new Schurr Pool show the formations pass from the Pennsylvanian to the Silicious lime, missing the chat, Viola and Wilcox sand formations. These same conditions exist in the El Dorado Pool.

Voshell Pool

The potential production of the old producing wells in the Voshell Pool was 12,201 bbls. Of this the different companies will produce 25 per cent, or approximately 3,000 bbls. a day. The actual production in the pool is expected to be increased by the completion of new wells. The next potential gauge will be taken March 1 and 2, for the first 15 days in March.

The Sinclair Oil & Gas Co.'s No. 1 Voshell, SW cor. NW NW, Section 10-21-3w, was the ninth well completed in the pool. The well had the Wilcox sand at 3,352-61 feet, where the well swabbed 802 bbls. in 17 hours. The Texas Company's No. 1 Stuckey, NW cor. SW SW, Section 10-21-3w, had 1,500 feet of oil in the hole from the Viola at 3,358-59 feet. The test is on the southeast edge of the pool and will extend the production a quarter mile south. The Wilcox sand was found at 3,397-3,401 feet, where it swabbed 35 bbls. the first hour.

Dixie Oil Co.'s No. 1, in Section 20-17-3w, a wildcat in the northern part of McPherson County, had a showing of gas in the chat at 2,912-20 feet. The test was underreaming the casing to drill deeper.

The Derby Oil & Refining Corp.'s No. 2 Stuckey, SE cor. NE SE, Section 9-21-3w, in the Voshell Pool, had the Wilcox sand at 3,314-23 feet, where it made 735 bbls. of oil in 12 hours.

Transcontinental Oil Co.'s No. 1 Alger, SE cor. SW, Section 1-19-5w, in the western part of McPherson County, has been abandoned as a dry hole at a total depth of 4,030 feet. Water was encountered at 4,011-14 feet. Kansas Oil Co.'s No. 1 Otto, NW cor. SW, Section 21-20-1w, a semiwildcat near the Ritz Pool, was drilling in the Simpson sand at 3,262 feet. The test had a showing of gas at 3,011 feet, in the chat horizon. Helmerich & Payne's No. 1 Kaufman, NW cor. NE NW, Section 22-21-3w, in the southern part of McPherson County, has cleaned up a fishing job and was drilling ahead at 1,600 feet.

The Shell Petroleum Corp.'s No. 1 Southwestern College, in Section 2-27-1w, Sedgwick County, made 235 bbls. of oil and 351 bbls. of water from the Simpson sand at 3,391-94 feet, in 11 hours. On another day's swabbing the well made 147 bbls. of oil and 247 bbls. of water in nine hours.

Will Drill in Stanton County

The location for the first wildcat test ever started in Stanton County, in the southwestern part of the State has been announced by H. H. Brown and others' No. 1 in the SE cor. SW, Section 11-29-39w. The test is located about 11 miles southeast of Johnson, the county seat of Stanton County.

Greenwood County

In Greenwood County between the Frankhouser and Lamont-Demler Pools of the northern part of the county, Empire Oil & Refining Co.'s No. 3 Norton, SW cor. SE NE, Section 22-22-12, a new well made 85 bbls. in 24 hours. The Bartlesville sand was found at 1,692-1,713 feet, and after a 50-quart shot the well made 137 bbls. the second 24 hours. The new well is considered to be in the Norton extension to the Lamont Field.

Nine miles southwest of Madison, at the south end of the Seeley Pool, the Dixie Oil Co.'s No. 5 Ellis, in Section 27-23-11, Greenwood County, had the Bartlesville sand at 1,867-1,928 feet. The test is to be shot. It was estimated an average well.

Gypsy Sells Greenwood Leases

The Gypsy Oil Co. sold all of its producing properties in the northwestern part of Greenwood County to the Central Petroleum Co. of Tulsa. The property consisted of three leases with a total of 21 wells making 94 bbls. a day. These leases were the Cannon in Section 12-24-9, with eight wells making 40 bbls. a day; the Nixon in Section 34-24-9, eight wells making 49 bbls. a day, and the Osmondson, in Section 23-24-9, three wells making 5 bbls. a day. The consideration was $100,164.

In Other Counties

Derby Oil & Refining Corp. has announced another location for its No. 2 Beevers, in Section 25-24-12, eastern Greenwood County. The same company's No. 1 Beevers, a wildcat, is making 75 bbls. a day. Sinclair Oil & Gas Co.'s No. 1 is an offset to the discovery well in the same section.

The Biddle Pool, northeast of Winfield, in Cowley County, was extended recently by the completion of Roth & Faurot's No. 1 Roth, SW cor. NE SE, Section 12-32-4. The well began flowing by heads 10 bbls. an hour, from a total depth of 2,588-90 feet. The well will cause considerable activity in the pool which now has about 20 completed wells.

A new well in Elk County was completed by Ramsey, Berger & Hunt. It is No. 1 Hunt, NW cor. SE NW, Section 10-31-8, Elk County. The well is estimated at 50 bbls. from the pay horizon at 1,956-74 feet. Oil rose 1,500 feet in the hole in 12 hours.

Kinney-Coastal Oil Co.'s No. 1 Wies, in Section 20-13-4w, northwest of Salina, in Salina County, was spudded last fall and has been shut down at 750 feet since that time. It was cleaning out to be drilled deeper this week. The test is on a large block of acreage on which a favorable geological report was secured.

The future development of Harvey County, in the Halstead area, may depend upon the results of the tests drilling on the Shell Petroleum Corp.'s acreage which are being drilled by the McPherson Oil & Gas Co. The discovery well in the Halstead area was the McPherson Oil & Gas Co.'s No. 1 Haury, which was a gas well, and when drilled deeper had a showing of oil. Another test is drilling east of the discovery well and another test is drilling 1½ miles north in Section 33-22-2w, Harvey County.

The deepest test in the State has a fishing job. Watchorn Oil & Gas Co.'s No. 2 Harrison, in Section 20-32-21w, Clark County, has five joints of casing in the hole at a total depth of 6,065 feet.

Barton County

Tom Slick Oil Co. and others' No. 1 Disque, SW cor. NE, Section 23-17-11w, is a dry hole at 3,458 feet.

Butler County

Waltom Oil Co. has the rig up for No. 1 Unger, SE cor. NE SW, Section 31-26-6. Dixie Oil Co.'s No. 3 Stern, SE cor. NW SE, Section 28-27-6, is a rig. Blakesley & Wentz's No. 1 Scofield, NW cor. SW SW, Section 30-27-7, is a location. Aladdin Petroleum Co.'s No. 1 Ow, NE cor. SE, Section 20-26-7, has been deepened to 3,145 feet and abandoned.

Cowley County

McKnabb & Bess made location for No. 1 Johnson "A." SE cor. NE SW, Section 21-33-3. Lewis & Empire Oil & Refining Co.'s No. 3 Pierce "A," NW cor. NE SE, Section 30-31-6, has been completed for 60 bbls. in sand 2,901-40 feet.

Coffey County

Selby Oil & Gas Co.'s No. 2 Scott, SE cor. NE SW, Section 13-23-14, made 50 bbls. in sand 1,602-21 feet.

Dickinson County

Byron Emery, Inc., made location for No. 1 Hevner, NW cor. SE, Section 31-13-3.

Elk County

Kemper & Tory's No. 1 Goss, NW cor., Section 10-31-10, is dry and abandoned at 2,380 feet.

Greenwood County

McBride and others made location for No. 1 Shultz, NE cor. NW, Section 10-28-11. The Prairie Oil & Gas Co.'s No. 1 Parrish, SW cor. NE, Section 16-24-12, has been completed for 75 bbls. at 1,603 feet.

Kingman County

D. P. Fleeger's No. 1 Ashcraft, CEL W half E half, Section 16-28-7w, has been abandoned at 4,532 feet.

Lyon County

Sheedy and others' No. 5 Hughes, NW cor. SW SW, Section 19-21-10, made 15 bbls. in sand 2,195-2,215 feet after plugging back from 2,340 feet.

McPherson County

Simmons & Canary and others' No. 1 Anderson, C SW SW, Section 14-17-1w, is moving in material. Empire Oil & Refining Co. is building the rig for No. 4 Voshell, NW cor. SE NE, Section 9-21-3w, Voshell Pool. W. C. McBride, Inc., is erecting the rig for No. 5 Voshell, SW cor. NE NE, Section 9-21-3w. Mid-Kansas Oil & Gas Co. is moving material in for No. 7 Voshell, SE cor. NW NE, Section 9-21-3w. Material is also being moved in for No. 8 Voshell, NE cor. SW NE, Section 9-21-3w. Transcontinental Oil Co.'s No. 1 Algers, NE cor. SW, Section 1-19-5w, is a dry hole at 4,014 feet. Empire Oil & Refining Co.'s No. 2 Voshell, SE cor. NE, Section 9-21-3w, produced 1,822 bbls. in 22 hours from Wilcox sand 3,318-36 feet.

Osborne County

Mid-Kansas Oil & Gas Co.'s No. 1 Boyce, SE cor. NW, Section 18-6-13w, is dry and abandoned at 4,860 feet.

Russell County

Mid-West Exploration Co.'s No. 6 Gorham, NW cor., Section 9-14-15w, has

(Continued on Page 138)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

Company, farm and location—	Remarks:
BARBER COUNTY	
Skelly Oil Co.'s No. 1 Temple Ranch, Sec. 13-34-15w	Drlg. 4,750 ft.
Robertson et al's No. 1 Powell, SE cor. SE Sec. 11-32-10w	Shut down 3,955 ft.
BARTON COUNTY	
Prairie's No. 1 Davidson, NW SE Sec. 4-16-11w	Fishing 1,975 ft.
Slick et al's No. 1 Sweeney, SW NE Sec. 23-17-11w	Abandoned 3,435-58 ft.; water.
BUTLER COUNTY	
Shell Petroleum Corp.'s No. 1 Harper, SW NE Sec. 35-26-3	Drlg. 2,944 ft.
Martin et al's No. 1 Flanigan, C SW SE SW Sec. 29-27-3	Shut down 1,930 ft.
CHASE COUNTY	
Urschell et al's No. 1 Lippa, C SW SW Sec. 27-18-6	Drlg. 300 ft.
Steinbuckel et al's No. 1 Stephenson, NE SW Sec. 4-20-6	Drlg. 750 ft.
Steinbuckel et al's No. 1 Cook, SE cor. Sec. 21-19-8	Drlg. 925 ft.
E. W. Marland, Inc.'s No. 1 Altemus, SE NE Sec. 33-18-6	Drlg. 1,200 ft.
CLAY COUNTY	
Chrisler et al's No. 1 Tivier, SW cor. Sec. 19-8-3	Shut down 50 ft.
COWLEY COUNTY	
Prairie O. & G. Co.'s No. 1 Dosbaugh, SE cor. Lot 27, Sec. 18-32-8	Rig.
Edenfield & Fair's No. 1 Wallace, CWL NE Sec. 17-34-4	Shut down 365-75 ft.; 2,000,000 ft. gas.
Fine et al's No. 1 Brown, SE cor. Sec. 8-32-4	Drlg. 2,977 ft.
Milton & Mead's No. 1 Tatum, SE cor. SW Sec. 11-31-6	Shut down 1,920 ft.
DICKINSON COUNTY	
Emery-Curtis & Bryan's No. 1 Hevner, NW SE Sec. 31-13-3	Rig on ground.

(Continued on Page 170)

1,000 Bbl. Well in Carterville Area

Good Gas Showing in Mississippi Drowned by Water. Big Gassers in Louisiana but Arkansas Had Quiet Week

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Feb. 24.—A show of gas with salt water in Mississippi injected itself into this week's developments to divert attention momentarily from the day-to-day developments in Carterville and Zwolle, which have been of scarcely less absorbing interest than they were last week, though as far as Zwolle is concerned results were rather negative. Nevertheless there were nine new locations and derricks in the east end of the field as a result of Lide and others' big well of last week. Carterville came to the fore with a new gusher estimated at 1,000 bbls., but as none of the recent deep sand producers, of which this is the ninth, has ever actually made that on gauge, this estimate also is apt to be a little bullish. The largest of these producers gauged 917 bbls.

R. L. Steffy's Mississippi report states that the Jackson Oil & Gas Co.'s No. 1 Mays, Section 2-5n-1e, Hinds County, on the outskirts of Jackson, came in from 3,480 feet, with the bottom 20 feet in the chalk, early on February 16 after bailing for 50 minutes. It was estimated making at the rate of 2,000,000 feet of gas, until about 2,000 bbls. of hot, brackish water drowned it out shortly afterward. Nevertheless, it was the occasion for a "great migration" in Jackson during the week. A line was laid from the derrick some distance into a nearby field and a demonstration advertised by the owners of the well which attracted a tremendous crowd, according to information from other sources.

The mayor lit the torch, but after permitting it to burn for 13 minutes with a decidedly reddish flame, the crew closed the gate and the celebration was over.

At present the well is shut down with various rumors concerning its immediate future going the rounds locally. Probably it will be abandoned. The third well to make gas in considerable volume in Mississippi, it is not in its present state a commercial well though it would seem to be indicative of commercial gas in other wells on the Jackson structure provided they don't go so deep in the chalk. Home Oil Producing Co.'s No. 1 Rainey, Section 13-5-1e, a mile southeast of this well, showed considerable gas but ran into a cavity at 2,512 feet and was abandoned as a junked hole last month.

Sharp advances of 1,875 bbls. in Sarepta runs and 1,845 bbls. from Zwolle due to a series of big producers during the past week in Zwolle and Carterville Fields raised the total daily average shipments of crude from this division to 99,860 bbls., or a gain of 3,915 bbls., the total being 41,695 bbls. for Louisiana pools and 58,165 bbls. from Arkansas. With the exception of three or four pools in both States which were stationary every pool in the district save Sarepta, Carterville and Zwolle, showed declines ranging from nominal fluctuations to sizeable differences. DeSoto-Red River district followed Sarepta and Zwolle with an 800-bbl. increase.

North Louisiana

	Bbls.
Caddo, light	10,150
Caddo, heavy	2,690
Homer	3,560
Haynesville	4,570
DeSoto-Red River	3,155
Elm Grove	460
Bellevue	530
Cotton Valley	2,100
Urania	5,120
Pleasant Hill	735
Sarepta	3,275
Zwolle	5,300
Total	41,695

Arkansas

El Dorado	4,070
Smackover, light	5,160
Smackover, heavy	41,390
Stephens	970
Nevada	1,100
Lisbon	1,025
Champagnolle	4,220
Bradley	80
Mount Holly	150
Total	58,165
Both States	99,860
Last week	95,945
Increase	3,915

Zwolle District

Haynes Brothers appear to have a small pumper in No. 1 Dover, SW cor. SE NE, Section 28-8-12, 1½ miles north of production and three-quarters of a mile west of Olsan Brothers' No. 1 Keelan, in Section 27-8-12, temporarily abandoned at 2,265 feet with 150 feet of oil in the hole. Meanwhile Olsan Brothers' No. 1 Leone, in Section 32-8-12, has begun drilling as one of the flock of new tests north and just across the highway from Lide and others' big well on the edge of Zwolle. Haynes Brothers' well has about 50 feet of fluid in the hole, total depth 2,683 feet, the owners figuring the oil is coming from a break in the chalk at 2,643-60 feet. Benedum & Trees' No. 2-A Bowman-Hicks, in Section 3-7-12, a half-mile south of the discovery well in the Zwolle end of the field, has bailer stuck in the hole after bailing down 600 feet off bottom to test a small show of oil. Lide and others are reported arranging to pull drill stem from No. 1 Sabine Lumber Co., in Section 31-8-12, which caused all the excitement last week and which is still flowing around 1,000 bbls. Ruston Drilling Co.'s No. 1 Holliday, Section 35-8-12, a north offset to Ohio Oil Co.'s No. 1 Bowman-Hicks, in the same section, which pumped 45 bbls. on completion last week, is drilling at 2,684 feet with nothing showing except a little gas at 2,469 feet.

Sabine Oil & Gas Co.'s wildcat in Section 19-8-12, No. 1 Anderson, tested salt water at 2,603 feet and is waiting orders, and Tippett Drilling Co. is arranging to abandon No. 1 Hughes, in Section 36-8-12, the farthest east test in the field. It is a mile beyond the Ohio well just referred to and has total depth of 2,600 feet with about 10 feet of oil in the hole coming from around 2,570 feet. Warner-Quinlan's first test, No. 1 Sabine Lumber Co., in Section 34-8-12, was dry at 2,438 feet and bailed dry again with a show of oil at 2,495 feet and is waiting orders. Pelican Natural Gas Co. (Sam Hunter) has derrick up

(Continued on Page 137).

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA

BOSSIER PARISH—CARTERVILLE

Company, farm and location—	Remarks—
Bahan & Bahan's No. 1 G. W. May, 660 ft. S, 660 ft. W, NE cor., Sec. 26-23-12	Drlg. 1,200 ft.
Bahan & Bahan's No. 1 Floyd Pleasant, 150 ft. N, 150 ft. W. C. Sec. 25-23-12	Derrick.
Del.-La. Dev. Co.'s No. 2 Bollinger, 200 ft. N, 200 ft. W, SE cor. NE NE, Sec. 31-23-11	W.O.S.R; 500 ft. oil, 300 ft. S.W. 8-ft. sand; T.D. 3,164 ft.
Greenwood Prod. Co.'s No. 1 Bollinger, 1,980 ft. N, 1,150 ft. E, SW cor. SE, Sec. 36-23-12	O.W.D.D. 3,071 ft.
Goodman-Johnson's No. 1 Martin, 330 ft. S, 330 ft. E, NW cor. SE, Sec. 26-23-12	W.O.S.R.; T.D. 3,169 ft.
Lee Kinnebrew's No. 1 Garnett, 200 ft. S, 200 ft. W, NE cor. SW NW, Sec. 36-23-12	Location.
La. Pet. Corp.'s No. 2 J. W. Peyton, 1,170 ft. S, 150 ft. W, NE cor. SE, Sec. 25-23-12	Cmtd. 6⅝-in. 3,116 ft.
La. Pet. Corp.'s No. 3 Peyton, 660 ft. S, 150 ft. W, NE cor. SE, Sec. 25-23-12	Cmtd. 6⅝-in. 3,113 ft; T.D. 3,117 ft.
Lide et als' No. 1 Farrington, 330 ft. N, 330 ft. W, SE cor. NW NW, Sec. 23-23-12	Rig up.
La. Oil Ref. Corp.'s No. 1 Matlock, 2,970 ft. S, 990 ft. E, NW cor., Sec. 26-23-12	Rig up.
H. L. Hunt's (was Love et als') No. 1 Allen, SE cor. NE NE, Sec. 30-23-11	Rig up.
Muslow Oil Co.'s No. 1 Barnett, 1,320 ft. W, 660 ft. N, SE cor., Sec. 25-23-12	Cmtd. 6-in. 3,140 ft; 3-ft. sand 3,143 ft.
Muslow Oil Co.'s No. 1-B Kilgore, 3,050 ft. N, 1,930 ft. E, SW cor., Sec. 31-23-11	Arranging to cmt. 4½-in; T.D. 3,134 ft.
Muslow Oil Co.'s No. 1 Mark Myer, 1,980 ft. N, 330 ft. W, SE cor., Sec. 36-23-12	Arranging to deepen; T.D. 3,088 ft.
Muslow Oil Co.'s No. 2 Peyton, Sec. 30-23-11	Rig up.
Muslow Oil Co.'s No. 3 Peyton, Sec. 30-23-11	Began drlg. Feb. 17.
Northwest La. Gas Co.'s No. 5 Bollinger, 252 ft. E, 200 ft. S, NW cor. Lot 7, Sec. 31, in Sec. 33-23-11	Began drlg. Feb. 12; cmtd. 10-in. 250 ft; drlg. 2,700 ft.
Nat. Gas Prod. Co.'s No. 1 U. S. Govt., 660 ft. N, 660 ft. W, C, Sec. 31-23-11	W.O.S.R. 3,194 ft.
Nat. Gas Products Co.'s No. 2 U. S. Govt., NW cor. SE NW, Sec. 31-23-11	Began drlg. Feb. 14; cmtd. 10-in. 191 ft; drlg. 850 ft.
Nat. Gas Prod. Co.'s No. 2 U. S. Govt., NW cor. SE NW, Sec. 31-23-11	Rig up.
Nat. Gas Prod. Co.'s No. 3 U. S. Govt., 1,520 ft. S, 2,580 ft. E, NW cor., Sec. 31-23-11	Location.
Nat. Gas Prod. Co.'s No. 4 U. S. Govt., 2,440 ft. S, 2,580 ft. E, NW cor., Sec. 31-23-11	Location.
Palmer Corp.'s No. 4 Roberson, 660 ft. E, 660 ft. S, NW cor. NW NE, Sec. 26-23-12	2,000 ft. oil in hole; W.O.S.R; T. D. 3,175 ft.
Phillips Pet. Co.'s No. 1-A Bollinger, (formerly Sales & Walker's No. 4 Bollinger) 696 ft. S, 1,120 ft. E, NW cor. SW, Sec. 30-23-11	S.O. 3,132 ft. and 3,144 ft; tested dry; coring.

(Continued on Page 125)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA

BOSSIER PARISH

Company, farm and location—	Remarks—
H. S. Autrey's No. 1 Smith, 200 ft. S, 200 ft. W, NE cor. NW NW, Sec. 26-19-11	O.W.D.D; T.D. 1,836 ft; plugged back to 1,500 ft. and cmtd. 4½-in; bailing to test; T.D. 1,510 ft.
Nell & Lanier's No. 1 Biedenharn, SE cor., Sec. 23-21-14	W.O.S.R; 980 ft. oil in hole; T.D. 998 ft; arranging to re-test at 998 ft.
S. P. Lanier's No. 1 Le Rosen, 300 ft. S, 1,600 ft. W, NE cor., Sec. 26-21-14	Derrick.
Walker et als' No. 1 Antrim, NW cor. SE, Sec. 28-22-13	Set liner; washing; T.D. 3,184 ft.
C. L. West et als' No. 1 Sentell & Dickson, 2,310 ft. W. 395 ft. N, SE cor., Sec. 3-20-13	Drlg. 1,429 ft.

CADDO PARISH

Magnolia Pet. Co.'s No. 1 Swann, 330 ft. N, 380 ft. W, SE cor. NE SW, Sec. 16-21-14	Derrick.
L. B. Mawk's No. 1 Swann, 440 ft. N, 200 ft. E, SW cor., Sec. 23-21-14	Derrick.
R. W. Norton's No. 1 Hill, 630 ft. N, 1,260 ft. W, SE cor. NE, Sec. 33-23-16	D.S. test 8-ft. sand 4,479 ft; S.W; S.D. 4,496 ft.
I. N. Pharisa, trustee's No. 1 Oden, NE cor. SE NE, Sec. 16-19-14	S.D. 2,322 ft; topped sand at 2,396 ft; set 6⅝-in; T.D. 2,409 ft.
C. W. Robinson's No. 1 Wilson, 990 ft. S, 330 ft. W, NE cor. SE, Sec. 2-15-16	Began drlg. Feb. 17; drlg. 175 ft.
Old River Oil Co.'s No. 1 Sibley, 300 ft. E, 300 ft. S, NW cor. SE, Sec. 15-19-14	W.O.S.R. 2,495 ft.
Triangle Drlg. Co.'s No. 1 Hardy et als, 660 ft. N, 660 ft. W, SE cor. fractional Sec. 18-19-16	Rigging up.

CATAHOULA PARISH

Lochnager Pet. Co.'s No. 1 Taliaferro, 572 ft. E, 396 ft. S, C, Sec. 26-9-6	S.D. 906 ft.

CLAIBORNE PARISH

El Dorado Chief Oil Co.'s No. 1 Dance, C SW NE, Sec. 27-20-7	S.D. 2,240 ft.
Leue Oil Co.'s No. 1 Taylor, Sec. 16-22-6	Derrick.
Triangle Drlg. Co.'s No. 1 Kilpatrick, 660 ft. S., 660 ft. E, NW cor. SW NE, Sec. 7-19-5	Cored lime and sandy shale 4-518 ft.

CONCORDIA PARISH

Joe Man et als' No. 1 Maxwell, C, Sec. 35-3n-8e	S.D. account of high wtr; T.D. 400 ft.

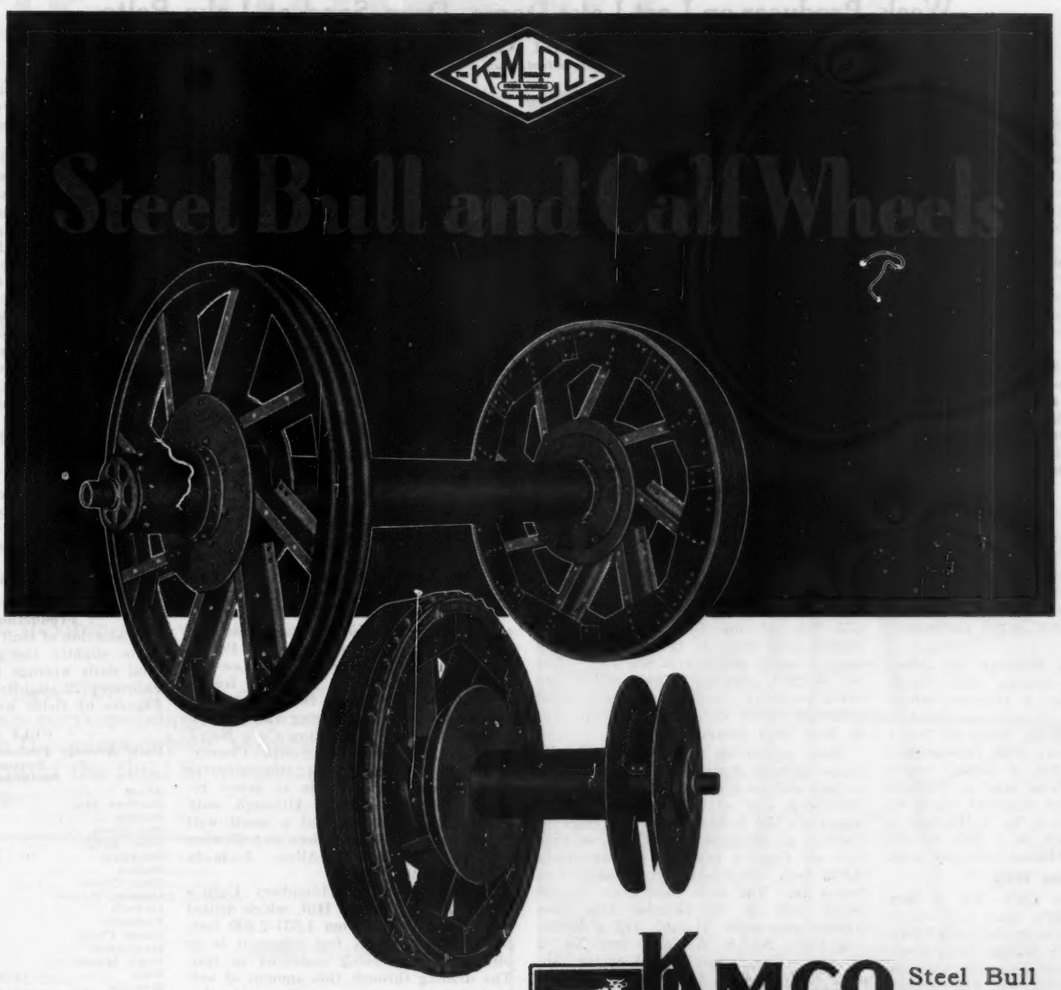
DE SOTO PARISH

Benedum & Trees Oil Co.'s No. 1 Johnson, 300 ft. S, 300 ft. W, NE cor., Sec. 7-11-13	Arranging D.S. test; T.D. 2,309 ft.
Benson Oil Co.'s No. 1 Harris, Sec. 6-10-13	Arranging test; T.D. 3,650 ft.
C. O. Roy's No. 1-B Farmer, 660 ft. S, 660 ft. E, NE SW, Sec. 18-13-13	Derrick.
R. O. Roy's No. 1-E Farmer, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 5-13-13	Drlg. 2,410 ft.

FRANKLIN PARISH

Davis et als' No. 1 Moore, 600 ft. W, 200 ft. S, NE cor., Sec. 12-11-6	S.D. 1,430 ft.
Evansville Inv. Co.'s No. 1 W. B. Welch, 945 ft. E, 511 ft. N, SW cor., Sec. 2-14-8	S.D. 3,030 ft.

(Continued on Page 87)



KMCO Steel Bull Wheels and Calf Wheels are noted for Ease of Assembly, Strength, Durability, Perfect Alignment and Balance and Smooth Running. Arms are placed tangential to the shaft and are riveted to heavy steel plates which bolt to hubs on shafts. Bearing surfaces in contact with center plates are machined to provide perfect alignment. Only sixteen bolts are required in each hub to attach wheels and all bolts are accessible with an ordinary wrench. It is impossible for any part of these wheels to get out of line and vibration is eliminated entirely. Shaft Hubs and Gudgeons are of a special steel mixture giving them 50% greater strength than that of ordinary castings. Manufactured in close conformity to A. P. I. Standards and available in all standard sizes.

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THE KIRK-MORROW IRON WORKS COMPANY

Sales Offices: Hunt Bldg., Tulsa, Okla.; Magnolia Bldg., Dallas, Texas; Central Bldg., Wichita, Kan.

Refugio Is Center of Developments

Two Salt Water Wells Blow Out and Two Extensions During Week. Producer on Lost Lake Dome. Deep Sand at Lake Pelto

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Feb. 24.—Two salt water wells in the new 5,400-foot sand pool opened on the east side, a blowout in a third deep well and an extension of the 3,700-foot pay on the northeast side with a 1,200-bbl. producer furnished a varied development for Refugio the past week. At this time, however, of chief importance at Refugio is Houston Gulf Gas Co.'s No. 1 M. F. Lambert, a wildcat approximately 11,000 feet from the 5,400-foot sand wells, which has drilled plug and is preparing to set screen and run tubing to test a new deeper sand at 5,879-84 feet.

Getting salt water in two of the 5,400-foot tests proved rather disappointing to the potential possibilities of that development, indicating a somewhat spotted and uncertain sand condition in this new deep sand similar to that which exists in the older 3,700-foot play. But because operators have had experience in the 3,700-foot field with the peculiar sand conditions which have made the successful completion of wells hazardous, this deep development is not particularly discouraging.

Both these tests, although not direct offsets, are near producing wells. Union Producing Co.'s No. 2 O'Brien, which tested salt water in sand at 5,554-68 feet, is 600 feet to the south of No. 1 O'Brien, the discovery well. Independent Oil & Gas Co.'s No. 1 Shelly, which flowed salt water from sand at 5,488-93 feet, is a northwest diagonal offset to Union Producing Co.'s No. 2 Mitchell, a deep producer which is a mile to the southwest of the O'Brien discovery well.

Running Wild

Union Producing Co.'s No. 1 Ben Shelton, another deep sand test which also showed salt water in the 5,400-5,500-foot horizon and which was being deepened provided a little sensation when it blew out while coming out with a core from a depth of approximately 5,800 feet. It is running wild with the blowout preventer connections broken off. It is expected this well will be lost. Although it is believed the blowout is from the 5,400-5,500-foot sand yet it is possible it is from the 5,800-foot level, which, if so, would indicate another sand depth, for the field. The Shelton well is approximately 800 feet to the north of the O'Brien discovery well of the Union Producing Co. Between these two wells is The Texas Company's No. 1 Shelton which is drilling in sand showing salt water at 5,508 feet.

So far there are only five 5,400-5,500-foot wells, one of which is a dry gasser and another is spraying only a small amount of oil due to the high pressure. The three oil producers are Union Producing Co.'s No. 1 O'Brien, the discovery well on the east side of the older 3,700-foot field, the same company's No. 2 Mitchell, a mile to the southwest, and Saxet Oil Co.'s No. 1 Powers, between these wells, as is Union Producing Co.'s No. 2 Powers, the gasser, spraying oil.

Series of Good Wells

On the northeast side of the 3,700-foot field and fully 1,000 feet to the north of the nearest oil production, Larco Oil Co.'s No. 2 Strauch made a 1,200-bbl. producer from a sand at 3,671 feet, bottom of the hole being 3,707 feet. This well followed a series of other good wells completed the forepart of the week including Morgan Oil Corp.'s No. 1 Swift and the Houston Gulf Gas Co.'s No. 2 Morgan-Vance, and No. 3 Cummings. The latter company's No. 6 O'Brien, in the northwest portion of the field in a dry gas area, was completed as a dry gasser at 3,683 feet. The Strauch well's south offset, Sun Oil Co.'s No. 3 Buckley, also is in the sand and is waiting casing cement to set.

A slight decrease was indicated in daily production of Refugio for the week due to the fact that operators made an attempt to pinch in further their wells. Although for the first time since the flush development there is ample pipe line and tank car capacity for the field's production, because of delay in the movement of some contracts, lack of market and the overcrowded storage it has been impossible to move the crude, which has forced a curtailment of the output. However, the addition of new production during the week and an increase in flow of wells of several companies, have resulted in a restoration of the field to its former level and are boosting the output to new high marks.

Lost Lake Dome Producer

Late in the week Pure Oil Co. added another good producer on Lost Lake Dome, northern Chambers County. This well, No. 9 Mayes, which marks a small extension of the producing limits, flowed 675 bbls. of pipe line oil on a three-eighths-inch choke in the first 24 hours from a sandy shale at 2,832 feet. The oil is 23.4 gravity. The well is the sixth producer completed at Lost Lake although recent completions, except No. 9, have been disappointing.

New production added in the Gulf Coast district during the week included a deep well in a semiwildcat area of the northwest side of Humble in John A. Deering's No. 5 Bissonet which came in flowing an estimated 1,700 bbls. of pipe line oil from a sand at approximately 4,050 feet. Forty-six feet of sand was taken in. The deep sand play on the south side of the Humble area also yielded two wells, Humble Oil & Refining Co.'s No. 8 Williams and No. 2 Trahon. The former flowed at the rate of 950 bbls. daily from sandy shale at 5,162 feet and the latter from shale at 5,195 feet.

Other completions were: Rio Bravo Oil Co.'s No. 11-B Settegast, west side of Pierce Junction, 1,845 bbls. pipe line oil, 3,694 feet; The Texas Company's No. 4 Botney Bay, Port Barre, St. Landry Parish, 1,500 bbls., 3,426 feet; Gulf Refining Co.'s No. 1 Ovide Lahaye, Port Barre, 2,300 bbls., 3,378 feet; McAlbert Oil Co.'s No. 4 Woodward, Barbers Hill, 500 bbls., 5,202 feet; Mills Bennett Production Co.'s No. 3 Smith, Barbers Hill, 1,020 bbls. fluid, 90 per cent salt water, 5,360 feet; Yount Lee Oil Co.'s No. 2 Phillips, Barbers Hill, 600 bbls. net oil, 5,228 feet; Cranfill & Reynolds Oil Co.'s Nos. 4 and 6 Esperson, Sheeks, Liberty County, the former flowing 470 bbls. of fluid, 35 per cent water at 3,334 feet, and the latter 87 bbls., 6 per cent water at 2,298-2,320 feet; Humble Oil & Refining Co.'s No. 2-B Bankers Mortgage, DeWalt, 600 bbls., 3,727 feet; Empire Gas & Fuel Co.'s No. 11 Barngrover, Hull, 500 bbls., 3,687 feet; Yount Lee Oil Co.'s No. 123 McFaddin, Spindletop, 960 bbls., 4,475 feet, and Marrs McLean's No. 12 Cade, High Island, 600 bbls. of fluid, 60 per cent water, 4,320 feet.

Jennings Field

Another attempt to find deep production far off the west and northwest side of the Jennings Field of Acadia Parish met with failure when Yount Lee Oil Co. abandoned its No. 1 Simms fee at a total depth of 7,310 feet. This was one of 14 tests quit during the week.

Mills Bennett Production Co.'s No. 1 Allen, Allen Dome, Brazoria County, completed February 12, continues to flow, producing by heads at latest report 155 bbls. daily. Although only about two weeks old and a small well it has produced longer than any flowing well yet completed at Allen. It is in sand at 4,999 feet.

At Barbers Hill, Humphrey Corp.'s No. 2 Illfrey, Barbers Hill, which drilled through solid salt from 1,531-2,409 feet, has drilled to 5,087 feet where it is in oil sand with casing cemented to test. The drilling through this amount of salt back into formation caused considerable interest at the time and creates new possibilities for future development. That is, there perhaps are many tests drilled on the outer edges of domes which were abandoned in salt but which possibly could have been drilled through the salt and made wells in sands below.

Deep Sand at Lake Pelto

A deep oil sand has been encountered by The Texas Company in its second test drilled on the Lake Pelto Dome in southern Terrebonne Parish. The sand was topped at 4,278 feet and the hole deepened to 4,389 feet. Casing (9¼-inch) has been run to test the sand. Lake Pelto, which is one of the seven taken over from the Louisiana Land & Exploration Co., already has been found productive in the first test, No. 1 State. This well, still producing, came in making initially 17 bbls. of pipe line oil hourly, is in a shallow sand at a total depth of only 1,388 feet.

Late in the week The Texas Company was preparing to set screen to test its No. 2 Polk in its new field in southwestern Orange County near Port Neches. The well is in oil sand at 3,141-46 feet. It is a west offset to No. 1 Stark and a diagonal offset to the discovery well, No. 1 Kuhn.

Production Declines

Production of Gulf Coast fields declined again slightly the past week with the total daily average for the week ending February 22 slightly above 197,000 bbls. Figures by fields were:

GULF COAST

Daily Average Production for Week Ending February 22

Southeast Texas	
Allen	165
Barbers Hill	23,050
Batson	1,187
Big Creek	3,782
Blue Ridge	1,925
Brenham	150
Boling	1,053
Clay Creek	1,647
Damon Mound	517
DeWalt	12,376
Fannette	1,141
Goose Creek	4,900
Hankamer	46
High Island	1,559
Hull	8,472
Humble	15,193
Jasper County	25
Lost Lake	720
Markham	330
Nash	342
North Dayton	1,190
Orange	2,594
Orchard	80
Pierce Junction	11,113
Port Neches	1,655
Raccoon Bend	11,827
Refugio	35,594
Sheeks	860
Saratoga	1,007
Sour Lake	2,313
So. Liberty-So. Dayton	5,795
Spindletop	18,002
West Columbia	6,323
Total Southeast Texas	176,934
Week ending February 15	179,639
Decrease	2,705
South Louisiana	
Anse La Butte	45
Bayou Blue	68
Bayou Bouillon	33
Black Bayou	134
Caillou Island	....
Edgerly	601
Jennings	1,107
Hackberry	3,069
Lake Barre	237
Lake Pelto	251
Lockport	3,089
New Iberia	7
Port Barre	1,568
Sorrento	97
Starks	430
Sulphur	5,325
Sweet Lake	20
Vinton	4,100
Welsh	195
White Castle	379
Total South Louisiana	20,755
Week ending February 15	21,733
Decrease	978
Total Gulf Coast	197,689
Week ending February 15	201,372
Decrease	3,683

GULF COAST FIELDS AND WILDCATS

Week Ended February 22

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 2 Barber, north side—Drlg. shale and lime 6,345 ft.; cemented 6⅝-in. casing.
Mills Bennett Production Co.'s No. 7 Barrow, north—Drlg. sandy shale 4,885 ft.
Mills Bennett Production Co.'s No. 3 J. F. Wilburn, southeast—Drlg. shale 3,562 ft.
Mills Bennett Production Co.'s No. 3 Collier—Drlg. rock 2,084 ft.
Mills Bennett Production Co.'s No. 1 Higgins—Location.
Gulf Production Co.'s No. 2-A Wilburn, southeast—Drlg. gumbo 2,457 ft.
Humphreys Corp.'s No. 1-F Barber, northwest—Drlg. shale and lime 2,320 ft.
Humphreys Corp.'s No. 2-C Kirby—Drill stem stuck 4,774 ft.; cemented to 2,000 ft. to sidetrack.
Humphreys Corp.'s No. 1 McLean, east side—Drlg. shale 5,908 ft.
Humphreys Corp.'s No. 2 Ilfrey, east side—Oil sand 5,087 ft.; cemented casing.
Humphreys Corp.'s No. 1 Morgan—Drlg. sandy shale 2,696 ft.
McAlbert Oil Co.'s No. 1 Higgins—Rig.
McAlbert Oil Co.'s No. 4 Woodward southeast—Comp. flowing 3,500 bbls. oil 5,202 ft.
Sinclair Oil & Gas Co.'s No. 3 Wilburn, southeast—Total depth 5,234 ft. in sandy shale; sidetracking stuck drill stem.
Sinclair Oil & Gas Co.'s No. 4 Wilburn, southeast—Drlg. shale and lime 4,417 ft.
Sinclair Oil & Gas Co.'s No. 5 Wilburn, southeast—Drlg. rock 2,086 ft.
Sun Oil Co.'s No. 4 Wilburn (southeast)—Drlg. shale 4,473 ft.
Sun Oil Co.'s No. 3 J. Wilburn (southeast)—Drlg. shale 5,274 ft.
Sun Oil Co.'s No. 3 J. Wilburn, southeast—Drlg. shale and lime 3,328 ft.
Sun Oil Co.'s No. 4 J. Wilburn, southeast—Drlg. rock 2,439 ft.
Sun Oil Co.'s No. 4 Chambers (south)—Drlg. shale 5,118 ft.
The Texas Company's No. 1 Lawrence—Pulling screen 5,367 ft.
Unice Oil Co.'s No. 2 Feldman, east—Total depth 5,026 ft.; cemented casing 5,010 ft.
Yount Lee Oil Co.'s No. 11 Chambers, south—Rigging up to pump 5,550 ft.
Yount Lee Oil Co.'s No. 12 Chambers, south—Abandoned in salt 1,796 ft.
Yount Lee Oil Co.'s No. 13 Chambers, south—Rig.
Yount Lee Oil Co.'s No. 2 Phillips, southeast—Comp. flowing 600 bbls. net oil 5,228 ft.
Yount Lee Oil Co.'s No. 3 Phillips, southeast—Derrick.
Yount Lee Oil Co.'s No. 6 Woodward, southeast—Location.
Yount Lee Oil Co.'s No. 1 Zadie Fisher, southeast—Drlg. sandy shale 4,540 ft.

(Continued on Page 129)

The STRONG STEEL ROTARY HOSE

PROMOTES TRUE ECONOMY

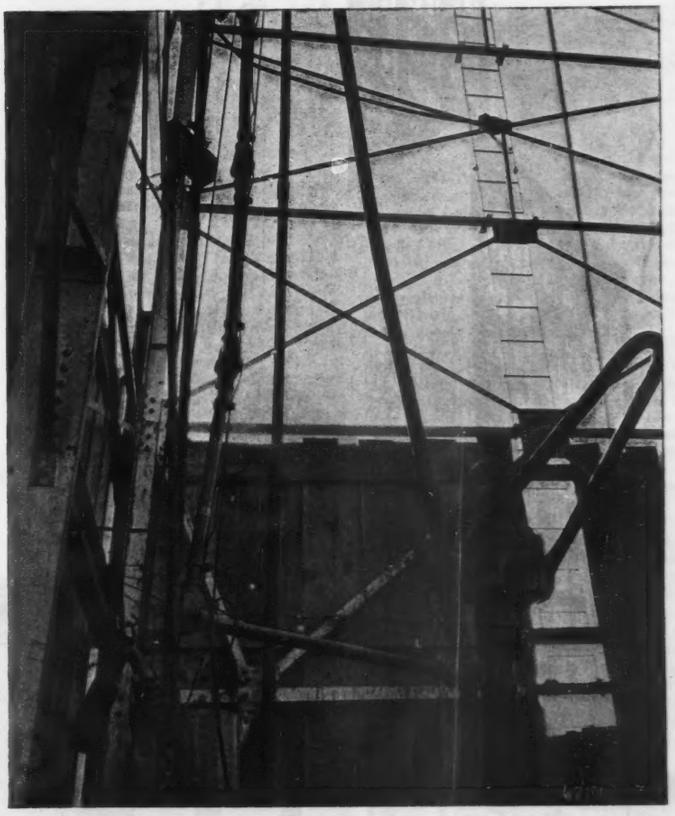
GREATER DRILLING EFFICIENCY
Circulation is the life of Rotary Drilling—the STRONG Hose will never fail under high pressure.

WILL SAVE MANY FISHING JOBS
See letter below.

WILL CUT DOWN HOSE BILLS
Replacement parts sold and service required on hose in use have been insignificant beyond all expectations.

The STRONG Steel Hose is scientifically designed for the purpose for which it is used—(it is not merely an enlargement of the well-known flexible elbow joint). It has no elbows — but hangs straight naturally, by gravity—as flexible as a watch chain, and cannot be pulled apart.

The joints have 70% greater capacity than the pipe sections, thus correspondingly reducing the fluid velocity through the joints, which, together with the novel arrangement of the fluid flow reduce sand cutting to a minimum.



3" Size at Oklahoma City on Rig of Capitol Drilling Co.

OSCAR R. HOWARD
OIL PRODUCER
58 FREMONT PLACE
LOS ANGELES, CALIFORNIA

January 7, 1930.

Strong Oil Tool Co.,
829 Santa Fe Avenue,
Los Angeles, California.

Gentlemen;

We have finished our deep well, Hathaway #7, at a depth of 9350 ft. and I want to tell you about the performance of your steel rotary hose which we purchased from you last September, subject to trial. The hose has proven satisfactory in every way and you are at liberty to bill us for same.

We installed your steel hose at about 8000 ft. and finished the well with it. During all this time we were running the pumps compounded and developing considerable pressures. The average operating pressure until we reached 9000 ft. was between 1200 and 1400 lbs., after that, from 9000 ft. on, the pressures ran between 1600 and 1800 lbs.. No leaks or trouble of any kind occurred, and the hose was as flexible as could be at all times.

We had one very satisfactory experience with it; at 9260 ft. the drill pipe froze; we pumped crude oil into the mud and ran up a pressure of over 2300 lbs.,(all the pumps would stand),before we succeeded in getting it down, and freeing the pipe. The hose stood up perfectly.

Again at 9325 ft. we plugged a bit and ran up a pressure of 2300 lbs. and blew up a rubber off the piston in one of the pumps, but the hose held.

Under the circumstances I can unhesitateingly recommend your hose, for it certainly saved us,what might have turned out to be,a costly fishing job

Yours very truly,

M. L. Borough
Supt.

The STRONG

STRONG OIL TOOL CO.
LOS ANGELES, CALIFORNIA

HOUSTON, TEXAS
Houston Oil Fields Material Co.

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EXCHANGE BANKS OF TULSA

Exchange National Bank · *Exchange Trust Company* · *Exchange National Company*

Combined Capital, Surplus and Undivided Profits Exceed $10,000,000
Resources Exceed $100,000,000

Record Producer for Southwest Texas

Gulf Completes Well in Darst Creek Field Which Flows 9,000 Bbls. Finished an 8,000-Bbl. Well Two Days Before

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Feb. 24.—The Gulf Production Co. completed a 9,000-bbl. well in the Darst Creek Field, the largest well ever completed in Southwest Texas, and brought it in only two days after it had broken the record with an 8,000-bbl. well in the same field. The company set the record twice in one week. Gulf Production Co.'s No. 2 Thomas Dix, in the J. R. Robinson Survey, 473 feet to the southwest line and 150 feet to the southeast line of the farm, came in at 2,577 feet, topping the Edwards lime at 2,538 feet and flowed initially at the rate of 7,800 bbls. of oil a day. Two days later the company brought in its No. 1 Knoblock at 2,540 feet in the J. R. Robinson Survey, flowing at the rate of 9,000 bbls. a day.

Total potential production of the field including the Magnolia wells as announced by the official gauge of the proration umpire February 15 was 68,994 bbls. daily. At the close of last week it was estimated that with new completions the potential production of the field was 100,000 bbls. daily. According to the proration agreement the actual production is held to 10,000 bbls. not counting the Magnolia wells which prorated on the same basis brings the actual allowable production to 11,201 bbls. New production added to the field the past week by the completion of 12 wells amounts to 30,268 bbls. which added to the potential production on February 15 brings the total to 99,262 bbls.

Interesting Features

There are some interesting things connected with these big wells completed the past week. Gulf Production Co.'s No. 1 Knoblock got a thin layer of Austin chalk and hit the Edwards high and it and No. 2 Thomas Dix which came in for 7,800 bbls. are thought to be on the apex of the structure and about as far northwest as the field will run. No. 1 Knoblock is about half way between No. 2 Thomas Dix on the northeast and the Humble Oil & Refining Co.'s No. 8 Denman on the southwest which came in flowing 800 bbls. of oil a day but which is said to be a downthrow well.

The wells completed the past week help very materially to shape up the producing area of the field. Humble Oil & Refining Co.'s No. 2 Dowdy, in the southwest end of the field, topped the Eagleford at 2,444 feet which looks low and may indicate something near the limits of the field in that direction. The same company's No. 1 Dowdy, located 700 feet east of No. 2, swabbed in at the rate of 500 bbls. of oil a day.

Of the 12 completions for the week 4 went to the credit of the Gulf Production Co. with a total initial production of 18,528 bbls. of oil a day, 2 to the Humble with a total of 1,400 bbls., 2 to the Magnolia with 2,000 bbls., 2 to The Texas Company with 4,740 bbls., and 2 to the United North & South with 3,600 bbls.

One of the interesting things of the past week is the developments around the Magnolia Petroleum Co.'s No. 1 Appling at the northeast end of the field. It is to be recalled that No. 1 Appling is not a normal well with the rest of the field but is undoubtedly producing from a crevice. All the other six wells drilling around it are now dry with the exception of one, the Magnolia Petroleum Co.'s No. 3 Roamel which is also producing from a crevice and is a southwest offset to No. 1 Appling. Late last week Magnolia's No. 1 Echols, a south offset, was drilling at 3,550 feet. This is in keeping with Magnolia policy, and frequently resorted to, when a test in a field is dry to carry it on down to around 4,000 feet or deeper.

The Darst Creek Field may prove to chop off somewhere around the vicinity of No. 1 Appling, as indicated by these dry holes and crevice wells and then again something else may happen. Mundine in the early days of the field drilled a dry hole about a half mile south of No. 1 Appling and got formations all low. If the field extends past No. 1 Appling farther to the northeast toward the Penn Oil Co.-Simms Oil Co.'s No. 1 Manford it will probably be a narrow strip.

Total completions in the field down to last Saturday night were 74.

Balcones Fault

One of the spots along the Balcones Fault that is attracting some attention is Kendall County. Sterling's No. 1 Willie Werner has bailed quite a little oil out of the hole at a little below 900 feet. Some think it might make a 10-bbl. well. It is possibly producing from the top of the Pennsylvania. It is the first time any oil has been found in that county and nearly the first time anyone has drilled for oil in that county. It is on the upper side of the Balcones Fault and there are now about a half dozen wildcat tests in that part of the county either started or locations made. The quantity of oil in No. 1 Willie Werner is not so important but it forces attention to that county which in times past has been practically passed up by wildcatters. Major companies are paying attention and operators generally are looking into things up that way. All the territory including Blanco County farther east and the counties to the west are now due to be scrutinized more closely. It will be remembered that the Rodson test in the center of Blanco County had a little showing of oil.

Laredo District

There were no completions in the Laredo district the past week but some new locations were announced that are interesting. Cole Petroleum Co. has started its No. 68 Benavides in the Cole Pool in Duval County about 2 miles north of Magnolia's No. 1 Benavides, recently completed in a new sand at 2,777 feet and producing 30.8 gravity oil. The Cole test will be deep. When the Cole Petroleum Co. first began to wildcat in that part of the country it went into some deep sands but that was the days before drill stem testers were invented and the sands were not tested out. They had showings, however. This new test is more toward the center of the producing area and hence will be watched with interest as many believe the lower sands will conform in position to the upper and their test will be nearer to the center of the structure.

Another important test in that country is The Texas Company's No. 1-B Guerra in Starr County a half mile northeast of No. 4-A Guerra, the discovery oil well of the county. This is the company's first location since bringing in the discovery well at 3,566 feet.

Beeville Area

Doctor Hewitt, an early developer of gas in Refugio Field and driller of the first well in the Pettus gas field, has just completed taking a block of leases immediately southwest of the town of Beeville. This block was taken on a drilling contract. Leasing has been quite active on both the north and south sides of the town of Beeville.

Goliad County

The Humble Oil & Refining Co. has made a location on the Lackey and Weldon 1,000-acre tract in western Goliad County. This new location is 2,000 feet from the southwest and 2,000 feet from the southeast lines of the 1,000-acre tract which places the well location in the southwestern part of the Javiano Gomez Survey. This tract nearly offsets Union Producing Co.'s No. 3 Ray which is continuing to head two or three times daily and makes about 10 bbls. of oil very similar to No. 1 McKinney, 3 miles west. The Humble's new location will be slightly east of north of No. 3 Ray and should be higher on structure if the axis of the Pettus structure runs northeast and southwest. This new location of Humble Oil & Refining Co. will be nearly on a line between No. 1 McKinney to the southwest and Morgan Oil Corp.'s No. 1 George Ray, located 150 feet out of the most southwestern corner of the George Ray 636-acre tract 1 mile north of Zoch's No. 1 Kaufman, the discovery gas well in western Goliad County, about 3 miles nearly due east of the Humble's location.

Morgan Oil Corp. is running surface casing in No. 1 George Ray in western Goliad County on the 636-acre tract.

Production

Daily average production of the pools in Southwest Texas in the week ending February 22 follows:

Branyon	24
Brooks	....
Buchanan	34
Bruner	25,278
Dale	383
Darst Creek	15,066
Kingsville	170
Larremore	89
Luling	9,868
Lytton Springs	920
Manford	550
McCullen County	35
Medina County	22
Mirando	9,020
Pettus	....
Somerset	1,644
Star	34
Victoria County	7
Yoast	780
Total Southwest Texas	63,924
Week ending February 15	65,922
Decrease	1,998

Bee County

Union Producing Co.'s No. 5 Ray, a long offset to the northeast of Houston Oil Co.'s No. 1 McKinney, has been slowed up cutting some very tough gumbo but is expected to be on the McKinney discovery well sand by the last of the week. Houston Oil Co. has a steel derrick up about a mile to the southwest of No. 1 McKinney, 200 feet out of the northeast corner of the Portis tract and the rig from No. 1 McKinney well is being rigged up over this location.

No. 1 McKinney is still closed in with two 1,000-bbl. tanks filled with the 45 gravity oil and one 1,000-bbl. tank standing empty for reserve. While the side tracks in Pettus are crowded with cars of equipment, work is not being rushed on completion of the Humble's loading rack for the removal of this oil from the Pettus area. With the present overproduction this condition is to be expected.

Morgan Oil Corp. has set 500 feet of 10-inch surface casing in No. 1 George Ray 938-acre tract, about 2 miles southwest of No. 1 McKinney, discovery well of Pettus Field.

Morgan Oil Corp. has material on the ground for the erection of a wooden derrick in the northeast corner of the George Ray 938-acre tract comprising the John A. Williamson Survey. This location will be directly across the railroad and highway from Houston Oil Co.'s No. 1 Portis location.

The Morgan Oil Corp. has also made a location on the F. C. Nichols tract in its 2,000-acre wildcat block just north of the Pettus gas field. The major portion of this block is just across the Bee County line in Karnes County and is east of where The Texas Company is now drilling No. 3 Tipps, a deep test on Medio Creek to the west of the underpass on the Corpus-San Antonio highway. The Texas Company's test is running day and night crews and has reached a depth of nearly 2,000 feet.

The Texas Company has reached a depth of 750 feet in shale in its core test on the Lasater tract, shown on most maps as the Hill estate 170.3-acre tract about 4 miles due east of Normana.

Discovery of some high gravity oil at 179 feet in a well being drilled for water at the southwest corner of the Trinity Drillers block on the Bee-Live Oak County line has created quite an excite-

(Continued on Page 131)

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

Company, farm and location—	Remarks:
ATASCOSA COUNTY	
Frontier Oil Co.'s No. 1 Hoffman, 2,122 ft. from E line, 1,550 ft. S line of tract in the John Sharp Sur., 3 miles SW from Somerset Field	T. D. 1,200 ft. in shale.
BASTROP COUNTY	
H. C. Kate et al's No. 1 C. L. Lackey, 5,150 ft. NW line, 1,500 ft. SW line of 219-ac. tract in the Joshua Gray Sur., 2 miles W from Bateman	Rigging up.
B. L. Batts et al's No. 1 A. A. Alexander, W. M. Eastland Sur., 4,190 ft. to NW line, 1,320 ft. to SW line of Sur.	Shut down 1,325 ft.
Jim Harper's No. 1 Mitchell, 150 ft. from SE cor. Blk. 111, Bastrop Townsite	Derrick.
Abernathy et al's No. 1 A. Aldridge, in the Martha Barker Sur., 2,750 ft. SE and 450 ft. NE of 241-ac. tract or 2,000 ft. SW and 4,500 ft. NW of Sur.	T. D. 2,051 ft.; drlg. in chalk.
Superior Oil Co.'s No. 1 A. Lasher, D. Dykes Sur., 600 ft. to S and W lines of Sur.	Rigging up.
BEE COUNTY	
The Texas Company's No. 1 Lasater (core test), 930 ft. N, 20 ft. E from SW cor. of Lasater 170-ac. tract (shown as Hill tract on map), thence 2,100 ft. S, 70 ft. E Jose Maria Uranga Sur.	T. D. 150 ft.; drlg. in shale.
Houston Oil Co.'s No. 1 J. F. Portis 288.3-ac., 1 mile SW of No. 1 McKinney, in the A. Smalley Sur.	Steel derrick up.
Dr. Bozo & Cooper's No. 1 A. J. Kimbell, C 189 acres in the Stephen Winship Sur.	Standing.
Morgan Oil Corp.'s No. 1 Geo. A. Ray, 2 miles SW of No. 1 McKinney, NW Medio Creek, NE part Geo. Ray 936-ac. tract in the John W. Williamson Sur.	T. D. 500 ft.; set 500 ft. of 10-in. surface csg.
The Texas Company's No. 3 Tipps	T. D. 1,635 ft.; drlg. in sandy shale.
BEXAR COUNTY	
Burton Oil Co.'s No. 1 P. H. Shook, in the Monjares Sur., 3,150 ft. to E line, 150 ft. to N line of farm, 10 miles SE from San Antonio	T. D. 625 ft.; drlg. in shale.

(Continued on Page 130)

Explore for Gas in San Juan Basin

Eastern-Owned Company Acquires 30,000 Acres of Leases. Report of Big Well in Osage County, Wyoming

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Feb. 24.—Considerable development work in the San Juan Basin, northwestern New Mexico, is in prospect as a result of a deal whereby the Virginia-Mex Oil & Gas Co. acquired 30,000 acres in promising territory. The Magnolia Petroleum Co.'s No. 1-X Lindley in the Jal Pool in Lea County, is drilling in with 400 feet of oil in the hole and the Texas Pacific Coal & Oil Co.'s No. 3 State in the Cooper area is showing 15,000,000 feet of gas. Drilling in the Hobbs area is at a standstill and in the Lea area Snowden & McSweeny's No. 1 State swabbed 200 bbls. in 6 hours. Eddy County had a failure in V. P. Welch's No. 1 State.

One new operation commenced spudding in Utah in the Utah Southern Oil Co.'s test at Cisco.

There were no completions in Colorado, though several wildcats are at critical stages.

Wyoming had an unverified report of a 1,000-bbl. well in the Osage Field in the northeastern part of the State where the major operators did considerable drilling in 1920 and 1921 and then pulled out.

NEW MEXICO

Northwestern New Mexico, where drilling operations have been at a low ebb for several months, came in for considerable attention in the past week following an announcement by George F. Bruington, an attorney at Farmington, of a deal involving a number of properties. The Virginia-Mex Oil & Gas Co., which recently put in a bid for a franchise to supply Albuquerque with natural gas from the San Juan Basin, has purchased outright, leased or contracted to drill on land exceeding 30,000 acres embraced in 22 parcels and extending from the Barker Dome in the northern part of the basin to and including the Blanco area. The properties acquired include the Union Oil & Mining Co.'s No. 2 Pine, SE SW, Section 8-29-9, in the Blanco district, and the surrounding acreage; the gas rights on the Huntington Park Oil Co.'s acreage in the Blanco district; leases on the acreage between the Union and the Huntington Park tracts, and 4,000 acres northeast of the Huntington Park holdings. Other holdings acquired include 8,000 acres in the triangle lying between Bloomfield, Aztec and Blanco. Three rigs have been purchased and five more are to be brought in for their drilling campaign.

According to Mr. Bruington, the men comprising the company are Judge H. D. Rummell, of Charleston, W. Va., general counsel for the United Fuel & Gas Co., of Charleston, now the Virginia Gasoline & Oil Co., a subsidiary of the Columbia Gas & Electric Co.; Arthur Burdette, of Charleston, one of the owners of the Viking Gasoline Co., a large producer of gasoline from absorption plants; Walter Halihan, president of the Purity Oil Co. of Texas; Charles Spalding, of the Libby-Owens Glass Co., owner of the Libby Art Glass Works and the Owens Bottle Co.; Albert F. Black, a West Virginia banker, and Guy B. Ray, of C. T. Ray & Sons Co., of Hamlin, W. Va., and others. C. J. Knutson, of the Ralph Davis Engineering Co., of Pittsburg, made the report on the properties for the company.

The area involved lies to the east of the hogback that traverses the basin in a southwest-northeast trend. The Hogback, Rattlesnake and Table Mesa structures are to the west of this hogback. The area to the east is much deeper drilling than to the west and younger formations of the upper Cretaceous mostly have been the objectives of past wildcatting. A number of important and favorable showings of oil and gas have been encountered. The Union well in Section 8-29-9, was drilled to 4,030 feet when the tools were lost and it could not be drilled deeper. It was plugged back to a show at 3,050 feet where it averaged 5 bbls. per day. The Huntington Park well in the SE SE, Section 29-30-9, had about 25 bbls. a day in the Farmington sand at 1,645 feet and was drilled to 4,550 feet in the Mesa Verde where it was completed for 1,000,000 feet of gas and 10 bbls. of oil per day.

The Southern Union Gas Co., which recently took over a number of properties in the basin, has plugged its No. 1 Garland, NE NE, Section 11-28-11, in the Kutz Canon area, and skidded the rotary rig 50 feet to the south where it is starting a deep test. The Garland well was drilled to 3,050 feet when the hole was ruined by a fire that destroyed the rig several months ago. This well, which was drilled by the Angel Peak Oil Co., was estimated to be making 3,000,000 feet of gas a day when the fire took place. It had had showings of oil and gas in some upper horizons previous to that time. The Southern Union company also is a contender for gas franchises in central New Mexican towns and last week was granted a franchise by the Santa Fe city council subject to approval of the voters at a special election to be held at an early date.

Lea County

There has been a noticeable decrease in the number of active operations in Lea County, in the southeastern part of the state, during the past few weeks due to recent completions. The principal drilling wells include the following:

Jal Area

The Magnolia Petroleum Co. is drilling in in its No. 1-X Lindley, SE cor. NE, Section 26-25-36, in the Jal Pool, with prospects favorable for a good producer. It had 400 feet of oil in the hole at 3,239 feet and is drilling at 3,240 feet. This well is an offset on the north to the Skelly Oil Co.'s No. 1 Joyner, which was completed at 3,339 feet last May for 850 bbls. initial, the best well in that area up to that time. Only one other offset to the Skelly well has been drilled, this being the Gypsy Oil Co.'s No. 1 Humphreys, on the east, which missed the pay and was abandoned. The Empire Gas & Fuel Co.'s No. 2 Lindley, NE cor. SE, Section 14-25-36, is bottomed in lime at 2,867 feet and waiting for cement to set. The 9-inch was cemented on bottom. The base of the salt was at 2,820 feet and the top of the brown lime at 2,856 feet. The elevation is 3,105 feet. This well is an offset to its No. 1 Lindley which came in last month for 2,000 bbls. initial. The Humble Oil & Refining Co. is drilling an offset on the north and has a location for an offset on the east. The Continental has a location for an offset to the north and east. Previous to the starting of the Empire's well, the wells in that area had been spotted in the center of the 40-acre tracts, but the last 4 locations were spotted one well to each 10-acre tract.

Cooper Area

The Texas Pacific Coal & Oil Co.'s No. 3 State, NW SW NW, Section 21-23-36, is drilling at 3,457 feet and showing considerable gas. The flow of gas is estimated at 15,000,000 feet a day from the horizons at 3,420-32 and 3,456-95 feet. This well is located three-eighths of a mile north of its No. 2 State, NW cor. SW of Section 21, which is being deepened after being on a production test. The last named well is coring at 3,793 feet.

Eunice Area

The Continental Oil Co.'s No. 1 William Meyers, SW cor. NW, Section 28-22-36, is still bottomed at 3,750 feet and drilling by tools. It is making 10,000,000 feet of gas per day.

Hobbs Area

No new wells have been started in the Hobbs area in Lea County since the recent flock of completions, except that the Ohio Oil Co.'s No. 1 State-Northrup, NE NW SE, Section 32-18-38, between the Humble's No. 1 Bowers and the producers to the southeast, is building rig. The Midwest Refining Co.'s No. 6 Wright, NW cor. SW, Section 14-19-38, in the south end, which found water in the objective horizon, is shut down at 4,500 feet waiting for orders with 3,500 feet of sulphur water in the hole. It probably will be abandoned. About 12 to 15 miles west of the Hobbs Pool, the Penn Oil Co.'s No. 1 State, NE, Section 21-19-36, is being abandoned at a total depth of 5,775 feet. It had about 1,000,000 feet of gas at 4,310 feet, but this was soon exhausted. It cut the salt at 2,145-3,450 feet. The elevation is 3,859 feet.

Lea Area

Snowden & McSweeny's No. 1 State, NW cor. SW, Section 1-21-33, a little more than half a mile to the south of the nearest producer in the Lea Pool, was drilled to 3,801 feet where it swabbed 200 bbls. in 6 hours. It was also making one bailer per hour of sulphur water and it was decided to plug back. An unverified report is to the effect that the bottom water was cemented off and that it had swabbed 1,000 bbls. in 24 hours. In any event, the well appears to be a better one than was at first expected as it was believed to be on the edge. The Continental Oil Co.'s No. 2 State, SW cor., Lot 12, Section 1-21-33, is bottomed at 3,786 feet and has 2,000 feet of fluid in the hole. This well is north of the Snowden & McSweeny well and south of a producer, and is on a line with the several wells on the southeastern edge which have been showing water. Cranfill & Reynolds' No. 1-D State, SE cor., Lot 6, Section 3-21-33, which will test the west side, is drilling at 1,000 feet.

Maljamar Area

The Maljamar Oil & Gas Co.'s No. 3 Baish, SE NE NW, Section 21-17-32, is a location. It is in the immediate vicinity of some producers.

Eddy County

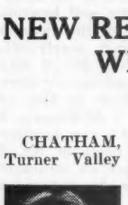
One failure was reported for Eddy County in V. P. Welch's No. 1 State, SW cor., Section 27-17-28, in the Artesia area, which was dry and abandoned at 2,512 feet. It cut the salt at 360-395 feet. The elevation is 3,691 feet. In the Maljamar area, northeast of the Artesia

(Continued on Page 138)

NEW RECORD IN TURNER VALLEY WITH TWENTY TESTS IN THE LIME

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Feb. 22.—The Turner Valley Field has established a new record with approximately 20 tests in the lime. A number of other tests are drilling close to the producing formation. The most recent deep lime producer, Home Oil Co.'s No. 4, Section 20-19-2w5, is apparently good for slightly more than 300 bbls. This is the fifth large producer in Section 20, the previous producers being Home's Nos. 1, 2 and 3, and Northwest-Associated's No. 1. Home's No. 1 at last reports was partially frozen off, but Northwest-Associated's No. 1, after being frozen, is reported to have blown back into production. The aggregate production of the five wells would be around 1,600 bbls.



Five additional tests in Section 20 are now in the deep lime. Baltac Oils' No. 1, LSD 13, is reported drilling 121 feet in the lime at 5,616 feet with a fair wet gas show. Hargal Oils' No. 1 is cemented at 5,076 feet and rigging up diamond drill to test. These belong to the Imperial group. On the southeast corner of Section 20, Wellington Oils' No. 1, LSD 1, is resuming at 4,676 feet after rigging up with new derrick, replacing one destroyed by fire. Calmont Oils' No. 2, LSD 11, surrounded on three sides by producing wells, is cementing casing in the top of the lime at 4,843 feet. In LSD 5, Alberta Pacific Consolidated's No. 1 is reported to have encountered a curious drilling condition, having entered the belemnite beds a third time at 5,288 feet; it is now drilling below 5,306 feet, with the lime expected at 5,370 feet.

Section 20-19-2w5 is the only portion of the South Turner Valley with commercial production in the deep lime, but tests drilling may extend the proven area. South of the Home and Associated producers in Section 17-19-2w5, Lowery Petroleums' No. 1, which got the lime at a normal depth of 5,107 feet, is drilling at 5,223 feet after encountering the usual small gas shows in the upper lime. Results here correspond very closely to the indications in the Home wells.

Further south in Section 17, Mayland Oil Co.'s No. 1, LSD 10, has provided one of the big puzzles of the South Turner Valley. This test got the lime at 5,441 feet but is down 6,242 feet without commercial production, at least one promising pocket of gas in the upper lime having quickly petered out. The drillers are fishing for tubing being run preparatory to a third or fourth production test.

Continuing along the structure to the southeast, a somewhat similar condition is found in Foothills Oil & Gas Co.'s No. 3, being drilled by Imperial Oil, Ltd., on acreage of the South West Petroleum Co., in LSD 10, Section 8-19-2w5. This test, which got the lime at a low point of 5,478 feet, is standing cemented 586 feet in the lime at 6,054 feet and is rigging up diamond drill to make a production test.

To the extreme south, Sterling Pacific Oil Co.'s No. 1, LSD 15, Section 33-18-2w5, presents something like a recurrence of the conditions encountered in Mayland's No. 1. It got the lime at normal depth, around 5,153 feet, but at last reports was drilling at 6,395 feet, some 1,242 feet in the lime, without commercial production. At this depth it is the second deepest hole in the Turner

(Continued on Page 132)

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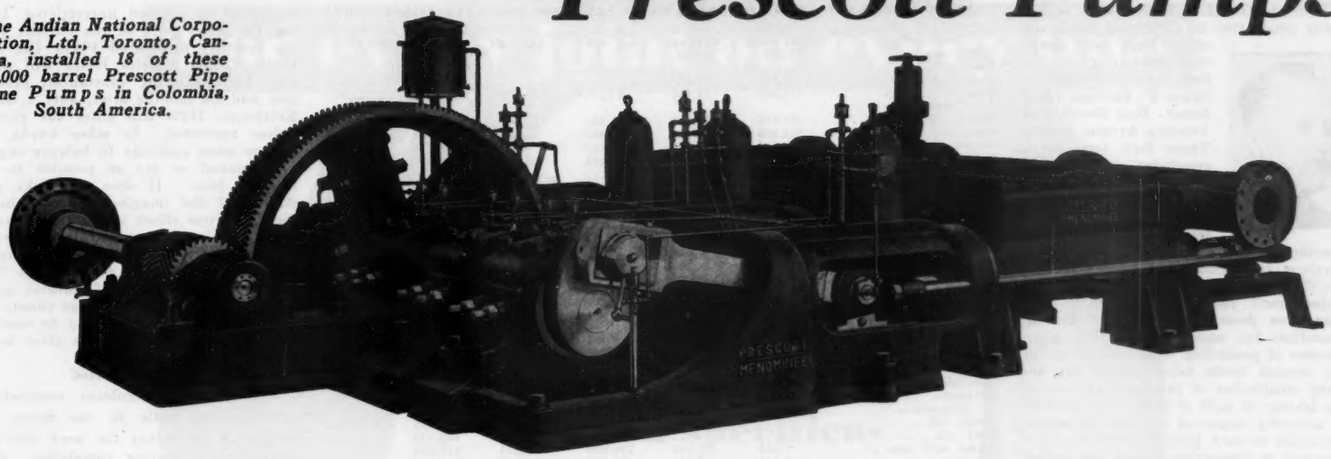
The Andian National Corporation, Ltd., Toronto, Canada, installed 18 of these 30,000 barrel Prescott Pipe Line Pumps in Colombia, South America.



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Santa Fe Springs on Downward Trend

May Cease to Be Dominant Factor Within Six Weeks. But Playa Del Rey and Kettleman Hills Are New Perils

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Feb. 22.—Daily production in California continued at a high rate again this week due to the flow tests conducted at Santa Fe Springs, Long Beach, Seal Beach and Ventura Avenue Fields. These flow tests were concluded at 8 o'clock Wednesday morning and operators immediately started beaning back on telegraphic advice from Umpire Grimm and in accordance with previous instructions. Final results of the flow tests conducted were not completed until yesterday, at which time they were presented to the fact-finding committee for consideration. The large number of producing wells shut down in the several fields being tested out delayed completion of tabulated results as the history of each of these wells had to be minutely inspected in order to assign potentials to each project which was not returned to production during the period of the test. It required 54 observers to conduct the flow test at Santa Fe Springs and 58 more at Long Beach.

The establishment of potentials at Seal Beach and Ventura Avenue was relatively simple from a checking standpoint due to the small number of operators in each area. It was the original intention of the general committee to only open up a limited number of producing wells at Ventura Avenue to determine the field's potential but a change was made at the last moment and the field committee was instructed to make a general flow test of all wells in the field with the exception of a few which have been standing shut in for several months because of their excessively high gas oil ratio. This general test was ordered to be conducted at Ventura Avenue in order to establish beyond any doubt the field's actual potential daily production. Curtailment orders predicated on the six-day flow tests concluded during the past week are expected to be issued by the general committee some time within the next few days as the committee went into executive session late yesterday afternoon, at which time the findings and recommendations of the fact-finding committee were submitted for consideration. The curtailment to be recommended by the general committee is a final effort to bring State production of crude oil down to 609,000 bbls. per day and thus reduce the disparity between supply and demand. If this movement fails to accomplish the desired results because of the failure of operators to carry out the prescribed cut, it is not at all improbable that drastic price cuts in crude and refined oils may follow. Ardent conservationists recognize this present curtailment program as a final attempt to stabilize production by mutual co-operation. If it does not succeed, it will be because individual producers fail to carry out their prescribed curtailment.

Santa Fe Springs

The initial daily production of new wells completed at Santa Fe Springs during the past week offers further corroboration of the opinion expressed during the past several weeks that this field has already passed its peak production and is definitely headed for a lower level. The exact date at which the peak was reached and the maximum production which it could have actually shown will remain unknown due to curtailment work during the period in question. It is quite likely, however, that Santa Fe Springs went over the top late in January several weeks sooner than anticipated. This is of special importance in view of the movement under way at the present time to initiate a further curtailment in order to bring State production down within hailing distance of 609,000 bbls. per day, as it is quite likely that actual field production will slide out from under any maximum allowable established by the general curtailment committee.

Recent developments tend to indicate that this field will duplicate past performance by registering an abnormally fast decline. The failure of Santa Fe Springs to come within 100,000 bbls. a day of its theoretical potential on a six-day flow test is ample assurance that this field is definitely headed for lower production. If this decline continues, and every indication points in this direction, Santa Fe Springs will cease to be the dominating factor in State production within the next six weeks. There are still quite a large number of incompleted drilling projects under way, but it is doubtful if their immediate completion will more than retard the future anticipated decline. It is the general consensus of opinion that there will not be any need of enforcing further curtailment at Santa Fe Springs after June 1 because of declining production in the meantime. Some even go so far as to venture the opinion that Santa Fe Springs will cease to be an important factor before another 60 days have elapsed.

Note of Warning

The decline in production expected to occur at Santa Fe Springs during the next few months will greatly alleviate the production situation but will not entirely rectify the present top heavy condition. Operators should not get the impression that if Santa Fe Springs should drop to around 125,000 bbls. per day or lower that they can with impunity resume maximum production in other fields, as the situation confronting operators is not wholly dependent upon overproduction at Santa Fe Springs. Elwood, Ventura Avenue and Seal Beach could easily result in a continuance of the present overproduction situation if production and development work were permitted to proceed unrestricted. During the latter part of the current year the recently discovered Playa Del Rey Field of Los Angeles Basin will probably begin showing substantial production and six months later, July 1, 1931, Kettleman Hills will enter the picture unless restricted. In other words, operators must continue to balance supply and demand as far as possible for at least a year. It does not take any stretch of the imagination to estimate the disastrous effect which would result from promiscuous unrestrained development at Kettleman Hills, particularly in view of the fact that wells in this field yield large quantities of natural gasoline and a crude oil which so closely resembles gasoline that it may be used in internal combustion engines after being filtered.

Wells Completed

The General Petroleum successfully finished two wells in the Santa Fe Springs Field during the week and has several more nearing completion. One of these projects, No. 137-D, showed an initial of 1,440 bbls. daily from the 8,000-foot level, but the other, No. 191-D, a new well on the Santa Fe Community Lease, was only good for 860 bbls. per day from 7,950 feet. George F. Getty added three wells to his list of producers, only one of which, however, resulted in favorable production. This was No. 31, which came in under a natural flow doing 2,240 bbls. of 34.6 gravity oil daily from 8,100 feet. Nos. 42 and 44, both new wells, showed small production upon completion. The former tanked 405 bbls. during the initial 24 hours following completion at 7,975 feet, while the latter made 870 bbls. initially from 7,950 feet.

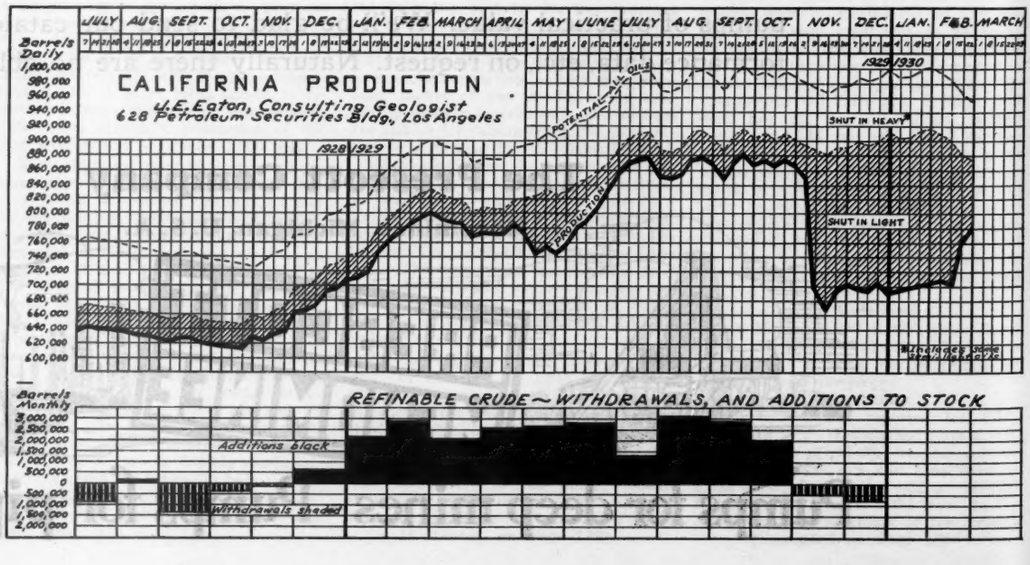
The Shell Oil Corp. was obliged to put No. B-3-A Slusher on a compressor as the well failed to result in a natural flow from the 7,902-foot level. Under this artificial stimulation this new well was finished doing 795 bbls. daily. The Shell has six other projects nearing completion on the Golay and Slusher leases at the present time. The Texas Company, with five wells scheduled for early completion, finished No. 7 Foix during the early part of the past week but this new well was only good for 598 bbls. of 33.9 gravity oil and 7,000,000 feet of

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	77,405	11,058	.....	.....	77,405	.....
Fuel oil	.....	.....	.....	.....	71,960	.....
Diesel and gas oil	116,036	16,577	.....	.....	475,897	389,566
Gasoline	151,314	21,616	147,198	21,028	2,454,230	2,759,943
Coastwise—						
Crude oil	404,796	57,828	438,853	62,693	2,142,241	4,173,995
Fuel oil	309,335	44,191	340,469	48,638	2,328,251	2,760,017
Diesel and gas oil	5,341	763	69,762	9,966	228,129	88,022
Gasoline	239,398	34,200	269,606	38,515	1,510,303	1,565,488
Kerosene	.....	.....	.....	.....	7,124	1,139
Exports—						
Crude oil	250,553	35,793	121,835	17,405	1,040,393	494,333
Fuel oil	413,687	59,098	109,505	15,644	2,140,837	2,755,200
Diesel and gas oil	66,194	9,456	164,513	23,502	660,874	391,863
Gasoline	217,703	31,100	267,329	38,190	2,124,042	1,230,018
Kerosene	102,245	14,606	.....	.....	323,363	397,600
Lubricants	5,057	722	.....	.....	5,057	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF COAST PORTS

Diesel and gas oil	11,050	1,579	77,230	11,033	88,280	.....
Gasoline	64,225	9,175	.....	.....	132,350	411,068
Coastwise—						
Fuel oil	115,737	16,534	44,750	6,393	486,364	406,146
Diesel and gas oil	8,681	1,240	9,989	1,427	44,546	27,989
Gasoline	139,045	19,864	132,510	18,930	669,443	455,018
Kerosene	.....	.....	13,471	1,924	60,994	11,738
Exports—						
Crude oil	.....	.....	.....	.....	3,075	71,463
Fuel oil	.....	.....	68,050	9,721	122,143	51,080
Diesel and gas oil	7,950	1,136	108,650	15,521	122,650	62,815
Gasoline	172,487	24,641	98,500	14,071	549,913	667,767
Kerosene	.....	.....	.....	.....	133,749	68,030
Lubricants	.....	.....	.....	.....	.....	13,693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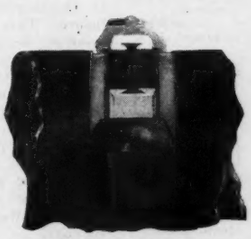

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natural gas daily from an even 8,000 feet.

The Co-operative Oil Syndicate recompleted its No. 2 Springs during the early part of the week and this former upper zone producer was returned to production doing 430 bbls. initially from 7,945 feet. The Superior Oil Co. also chalked up a recompletion but this project, No. 1 Wardman, was finished in the shallow zone with better success. It registered an initial daily production of 1,290 bbls. of clean 35.1 gravity oil daily from 5,017 feet, the hole having been finished with a 6⅝-inch combination string carrying 35 feet of perforated. The Union Oil Co.'s No. 13 Howard, a new well finished at 7,921 feet, was only good for 745 bbls. daily, the oil being clean and testing 32.3 degrees. No. 13 Blanchard of the Universal Consolidated, another new well, registered even smaller production as it was only good for 594 bbls. initially from 7,904 feet. The Shell put No. 24 Slusher on a production test late in the week but its completion is being held in abeyance as the output, 165 bbls. daily from 7,878 feet, is still showing an excessive water cut. George F. Getty's No. 40 Parcell, a new well, which registered 690 bbls. per day from 8,050 feet, is also showing a cut in excess of pipe line requirements but appears to be cleaning up.

Midway-Sunset

The Maricopa Flats section of the Midway-Sunset Field of Kern County yielded two big wells during the past week and a check indicates the probable completion of several additional producers in the near future. The best well added during the past seven-day period was No. 4 Havenstrite of the Reservoir Hills Gasoline Co., a subsidiary of the Rio Grande Oil Co. This new well, located in Section 17-11-23, came in flowing 3,600 bbls. of clean 21.9 gravity oil daily from 3,310 feet but it has subsequently built up to a little better than 4,000 bbls. per day. The crew from No. 4 was immediately transferred to No. 5 Havenstrite and this well is being rigged up preparatory to an early spud. The Barnsdall recompleted No. 1 Hazelton after battling the usual sand condition for several weeks and this project was returned to production flowing 2,475 bbls. daily after being cleaned out to bottom, 3,428 feet. No. 2-A on this lease is rotating ahead in the oil sand at 3,250 feet and this well should be tanking oil within the next few weeks.

The North American Consolidated's No. 6 Kerckhoff, in Section 8-11-23, came in flowing at the rate of 2,000 bbls. a day from 3,523 feet but it sanded up a short time later and will necessitate a clean out job before it is in a position to remain on consistent production. No. 4 on the same lease should also be tanking oil shortly as it is completed as far as drilling operations are concerned. The California Western Oil Co. should also chalk up a new completion in this area soon as No. 3 Havenstrite has been reamed preparatory to landing the oil string. No. 5 on the same lease should follow No. 3 into production within a short time as it is within 200 feet of completion. The Hancock's Nos. 3 and 4 on the Wallace lease in Section 8-11-23, No. 1 Son of the Union and Nos. 5 and 9 of the Standard are also approaching completion. In the Midway section of the Midway-Sunset Field the Republic Petroleum finished No. 35, in Section 8-32-23, doing 500 bbls. per day from 3,150 feet.

Long Beach

Drilling operations in the Long Beach Field of Los Angeles Basin were not productive of any satisfactory completions during the past week. Dabney & Johnston's No. 11, which was recompleted after being plugged back from 7,764 feet to 7,414 feet, pumped 75 bbls. of 19.0 gravity oil per day, and, since the output is cutting approximately 50 per cent, further work will probably be undertaken. Donley and Barteaux Oil Co.'s No. 1-A, another deep pumper, registered an initial of 170 bbls., but the output in this case is also cutting too high. E. T. Mattox also has a deep project which is pumping a small quantity of oil showing an excessive cut. This project, No. 1 Signal, is good for 70 bbls. per day from 6,300 feet, the oil testing 20.1 degrees and showing a cut of 30 per cent.

In the Playa Del Rey Field of Los Angeles Basin the Union Oil Co. has started rig construction for its initial test on the Del Rey lease in Section 28-2-15 and spud should be made some time within the next two weeks. The Ohio is making good time in both No. 2 Recreation and No. 1 Howland and preparations are being made to test out the shallow sand found in No. 2 Recreation at 3,865 feet. It is not possible to make any definite correlation from the well logs of Nos. 1 and 2 on the Recreation Gun Club property, although officials of the Ohio are rather inclined to believe that well No. 2 is running a little higher on the structure than the discovery well. If this supposition is ultimately found to be correct and the apex of the structure southwest of the discovery, it is not at all improbable that the Union may develop production in No. 1 Del Rey, located approximately 3,500 feet southwest of the discovery. The possible trend of the structure in this direction is interesting as it is moving away from the intensely subdivided town lot area. The proximity of the discovery well to the town lot area practically proves up this section for production as the nearest group of lots is within 500 feet of the well. The Ohio Oil Co. has shut in the discovery well, which was doing 1,950 bbls. per day at the time of suspension.

Huntington Beach

In the Huntington Beach Field the Barnsdall is stepping right along with its projected deep test on the Borcher property in the eastern end of the field. This well was acquired several weeks ago from Featherstone & Preston, who had suspended operations at approximately 4,350 feet. Recent developments indicate that the Huntington Beach Field is to be given a conclusive deep test in the very near future. Heretofore operators have been prevailed upon to forestall any work of this kind in order to preclude any possibility of precipitating an intensive drilling campaign if a new deep zone should be discovered. Opinion is divided as to the possibility of developing a new deep zone in this field and this will only be definitely decided under actual operating conditions.

Some geologists anticipate the existence of a deeper zone on the general law of averages that deeper drilling has been productive in nearly all other areas tested out in Los Angeles Basin. Those who are dubious over the existence of a deeper horizon substantiate their theories by calling attention to the fact that present production at Huntington Beach is coming from the Miocene, which, in age, correlates with the O'Connell, Clarke and Hathaway zones at Santa Fe Springs and the deep sands at Long Beach. It is reliably reported that the Superior Oil Co. will start a deep test at Huntington Beach in the very near future. This work will be watched with interest because of its extreme importance. In the Richfield district the Continental Oil Co. finished No. 3 Santa Fe, a new well, doing 340 bbls. daily from 4,550 feet, the hole having been finished with a 6⅝-inch liner carrying 381 feet of perforated. The Smith Petroleum Co. is making preparations to drill a new well in the Lawndale Field and this project, No. 3 Johnson, should get under way within the next week or 10 days.

Rincon

The General Petroleum appears definitely assured of developing commercial production in No. 2 Ferguson, a tideland project located out in the open ocean at the end of a 1,700-foot pier. This well blew in prematurely during the course of a water test being made last week and flowed for several hours at the rate of 500 bbls. a day from 2,560 feet. It was subsequently brought under control and drilling resumed with the result that approximately 50 feet of additional oil sand has already been penetrated. If the General Petroleum subsequently develops substantial production as the result of its tideland development at Rincon, it will undoubtedly precipitate additional drilling by other operators. The Honolulu Consolidated holds a substantial tideland permit east of the General Petroleum's Ferguson permit and reports indicate that the former is already making tentative plans to engage in tideland

(Continued on Page 137)

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Union, No. 1 Buel Canyon, Santa Barbara Co.	X- 7-31	3,570	hd. sd. drilling
Tannehill, L. B., No. 1 Los Olivas, Santa Barbara Co.	23- 7-31	3,560	br. sh. drilling
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	4,000	br. sh. drilling
Ohio Oil Co., No. 1 Lompoc, Santa Barbara Co.	2- 6-34	1,085	hd. sd. drilling
Prairie Oil Co., No. 1 Lompoc, Santa Barbara Co.	15- 7-35	rig	rigging up
Fields Gasoline Co., No. 1 Santa Maria, Santa Barbara Co.	8- 9-33	mtl.	building rig
Carey, A., No. 1 Goleta, Santa Barbara Co.	1- 4-28	2,880	will test
General Pet., No. 1 Goleta Tideland, Santa Barbara Co.	21- 4-28	4,533	gas well—idle
General Pet., No. 3 Goleta, Santa Barbara Co.	21- 4-28	4,350	sd. sh. drilling
General Pet., No. 1 Goleta Tideland, Santa Barbara Co.	21- 4-28	1,025	suspended
General Pet., No. 2 Goleta Tideland, Santa Barbara Co.	21- 4-28	1,940	sd. sh. drilling
General Pet., No. 3 Goleta Tideland, Santa Barbara Co.	21- 4-28	1,016	suspended
General Pet., No. 4 Goleta Tideland, Santa Barbara Co.	21- 4-28	1,035	suspended
General Pet., No. 5 Goleta Tideland, Santa Barbara Co.	21- 4-28	1,040	redrilling
U. S. Pet., No. 1 Goleta Tideland, Santa Barbara Co.	20- 4-28	745	sd. sh. drilling
U. S. Pet., No. 2 Goleta Tideland, Santa Barbara Co.	20- 4-28	1,032	suspended
U. S. Pet., No. 3 Goleta Tideland, Santa Barbara Co.	20- 4-28	1,019	suspended
Macmillan Pet., No. 1 Goleta Tideland, Santa Barbara Co.	21- 4-28	175	suspended
Standard, No. 2 Goleta, Santa Barbara Co.	X- 4-29	2,850	br. sh. drilling
General Pet., No. 3 Capitan, Santa Barbara Co.	4- 4-30	1,603	to test
Oakburn Oil Co., No. 1 Capitan, Santa Barbara Co.	4- 4-30	370	suspended
Oakburn Oil Co., No. 2 Capitan, Santa Barbara Co.	4- 4-30	200	suspended
Oakburn Oil Co., No. 3 Capitan, Santa Barbara Co.	5- 4-30	1,275	oil sand
Oakburn Oil Co., No. 4 Capitan, Santa Barbara Co.	4- 4-30	300	suspended
Oakburn Oil Co., No. 5 Capitan, Santa Barbara Co.	4- 4-30	325	suspended
Oakburn Oil Co., No. 6 Capitan, Santa Barbara Co.	4- 4-30	mtl.	building pier
Indian Pet., No. 1 Capitan, Santa Barbara Co.	4- 4-30	230	suspended
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	4,260	will test
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Shell, No. 1 Summerland, Santa Barbara Co.	18- 4-25	3,325	cemented
Standard, No. 1 Casitas, Santa Barbara Co.	26- 4-25	1,300	sd. sh. drilling
Continental, No. 1 Carpenteria, Santa Barbara Co.	33- 4-25	4,130	gas well—idle
Continental, Tideland permit No. 121, Santa Barbara Co.	33- 4-25	55	suspended
Continental, Tideland permit No. 122, Santa Barbara Co.	33- 4-25	158	suspended
Continental, Tideland permit No. 123, Santa Barbara Co.	33- 4-25	125	suspended
Continental, Tideland permit No. 124, Santa Barbara Co.	33- 4-25	560	sd. sh. drilling
Continental, Tideland permit No. 124-A, Santa Barbara Co.	33- 4-25	418	suspended
Continental, Tideland permit No. 125, Santa Barbara Co.	33- 4-25	120	suspended
Continental, Tideland permit No. 126, Santa Barbara Co.	33- 4-25	200	suspended
Continental, Tideland permit No. 127, Santa Barbara Co.	33- 4-25	145	suspended
Continental, Tideland permit No. 128, Santa Barbara Co.	33- 4-25	98	suspended
Continental, Tideland permit No. 129, Santa Barbara Co.	33- 4-25	97	suspended
Exeter Oil Co., Tideland permit No. 163, Santa Barbara Co.	32- 4-25	18	suspended
Getty, George F., No. 1 Carpenteria, Santa Barbara Co.	32- 4-25	68	cemented
Getty, George F., No. 2 Carpenteria, Santa Barbara Co.	32- 4-25	55	cemented
Shell, No. 1 Somis, Ventura Co.	23- 2-20	533	abandoned
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	3,460	redrilling
Bolsa Chica, No. 1-A Temescal, Ventura Co.	4- 4-18	1,850	br. sh. drilling
Fennell, E. A., No. 1 Piru, Ventura Co.	13- 4-19	1,275	sd. sh. drilling
Associated, No. 1 Rincon, Ventura Co.	19- 4-24	800	sd. sh. drilling
Continental, No. 3 Sulphur Mountain, Ventura Co.	21- 4-22	6,255	sd. sh. drilling
Milham Expitn., No. 9 Buttonwillow, Kern Co.	8-28-23	4,990	cleaning out
General Pet., No. 1 Buttonwillow, Kern Co.	6-28-23	mtl.	building rig
Lincoln Drlg. Co., No. 1 Buttonwillow, Kern Co.	17-29-24	135	suspended
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	mtl.	building rig
Elmer Oil Co., No. 1 Bena, Kern Co.	15-30-30	3,800	suspended
Elmer Oil Co., No. 1-A Rosedale, Kern Co.	33-29-26	5,262	suspended
The Texas Company, No. 1 Edison, Kern Co.	23-29-29	5,830	hd. sd. drilling
Shell, No. 1 Edison, Kern Co.	33-29-29	1,877	hd. sd. drilling
Symark Oil Co., No. 1 Edison, Kern Co.	24-29-29	2,130	suspended
Sayre, F. M., No. 1 Edison, Kern Co.	5-30-29	3,800	sd. sh. drilling
McVey, Max, No. 1 Jasmine, Kern Co.	23-25-27	rig	suspended
Bardeen, H. H., No. 1 San Emidio, Kern Co.	18-10-23	mtl.	building rig
Currency Pet. Co., No. 1 Jacalitos, Fresno Co.	28-21-14	3,470	hd. sd. drilling
Knudsen, John, No. 1 Jacalitos, Fresno Co.	14-21-14	1,490	suspended
Petroleum Securities, No. 2 Huron, Fresno Co.	28-20-16	7,390	suspended
Western Gulf, No. 1 Penoche Valley, Fresno Co.	26-15-12	2,020	sd. sh. drilling
Union, No. 1 North Huasna, San Luis Obispo Co.	12-32-14	5,425	br. sh. drilling
Midwest Refining Co., No. 1 Huasna, San Luis Obispo Co.	34-31-15	3,680	gr. sd. drilling
Panorama Oil Co., Well No. 1, San Luis Obispo Co.	7-31-21	4,019	fishing
Paso Robles Synd., No. 1 Creston, San Luis Obispo Co.	27-27-11	3,742	suspended
Union, No. 1 King City, Monterey Co.	8-22- 8	2,800	br. sh. drilling
Standard, No. 1 King City, Monterey Co.	23-22- 7	3,594	hd. sd. drilling
Pacific Inland Oil Co., No. 1 Parkfield, Monterey Co.	19-23-15	781	suspended
Penn Western, No. 1 Tulare Lake, Kings Co.	24-21-18	1,338	suspended
Wellport Oil Co., No. 1 Devils Den, Kings Co.	9-24-17	2,745	br. sh. drilling
Oceanside Oil Co., No. 1 Kreyenhagen, Kings Co.	32-22-16	300	suspended
Twin State Oil Co., No. 1 Soldani, Mendocino Co.	14-12- 7	2,080	sd. sh. drilling
Barnhart Trust, No. 1 Oakdale, San Joaquin Co.	3- 2-10	2,550	suspended
White, Roy, No. 1 Pixley, Tulare Co.	8-23-26	3,630	hd. sd. drilling
Terminal Oil Co., No. 1 Tulare, Tulare Co.	29-20-25	4,198	suspended
Terra Bella Oil Co., No. 1 Porterville, Tulare Co.	35-22-27	90	sd. sh. drilling
Getty, George F., No. 1 Chowchilla, Madera Co.	8-10-14	...	location

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Simmel, L. G., No. 1 Inglewood, Los Angeles Co.	21- 2-14	5,104	sd. sh. drilling
Raleigh Oil Co., No. 1 Malibu, Los Angeles Co.	1- 2-19	3,880	sd. sh. drilling
Clearwater Oil Co., No. 1 Bellflower, Los Angeles Co.	21- 3-12	4,300	sd. sh. drilling
Getty, George F., No. 1 Riviera, Los Angeles Co.	27- 2-12	3,890	hd. sd. drilling
Burlingham Pet., No. 1 Compton, Los Angeles Co.	17- 3-13	2,680	suspended
Diller, W., No. 1 Watts, Los Angeles Co.	8- 3-17	4,030	sd. sh. drilling
Calif. Well Drlg. Co., No. 1 Compton, Los Angeles Co.	11- 3-13	8,500	suspended
Crimson Pet., No. 1 Compton, Los Angeles Co.	22- 3-13	mtl.	building rig
Archer Oil Co., No. 1 Watson, Los Angeles Co.	17- 4-13	5,557	fishing
Harbor Oil Co., No. 1 Wilmington, Los Angeles Co.	18- 4-13	rig	suspended
Shell, No. 1 Van Nuys, Los Angeles Co.	19- 2-15	...	location
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	3,275	cleaning out
The State Co., No. 1 Puente, Los Angeles Co.	5- 2-10	4,472	gr. sd. drilling
Sherman, J. W., No. 1 Puente, Los Angeles Co.	33- 2- 8	850	suspended
Keck & Hall, No. 1 Puente, Los Angeles Co.	32- 2- 8	1,130	gas well
Marcel Pet. Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	1,560	hd. sd. location
Richfield Oil Co., No. 1 Puente, Los Angeles Co.	34- 1-10	...	location
Los Gatos Oil Co., No. 1 El Monte, Los Angeles Co.	16- 1-11	1,840	hd. sd. drilling
Coastline, No. 1 Devils Canyon, Los Angeles Co.	21- 5-17	2,542	abandoning
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	1,820	sd. sh. drilling
Martin, J. W., No. 1 Newhall, Los Angeles Co.	22- 1-17	1,120	sd. sh. drilling
Consolidated Oil Co., No. 1 Newhall, Los Angeles Co.	8- 3-16	1,555	cemented
National Sec., No. 1 Newhall, Los Angeles Co.	1- 3-16	874	cleaning out
Anderson, P. B., No. 1 Hasley Canyon, Los Angeles Co.	1- 3-16	900	suspended
Pioneer Pet., No. 1 Newhall, Los Angeles Co.	14- 3-16	210	sd. drilling
Union, No. 1 Coyote, Sansinena, Los Angeles Co.	30- 2-10	2,105	redrilling
Tureco Oil Co., No. 1 Whittier, Los Angeles Co.	29- 2-11	...	location
Beard, G. F., No. 1 Brea Canyon, Los Angeles Co.	30- 2- 9	1,099	suspended
Western Gulf, No. 1 Brea Canyon, Los Angeles Co.	28- 2- 9	3,088	br. sh. drilling
Standard, No. 1 Bastanchury, Coyote, Orange Co.	21- 3-10	4,270	sd. sh. drilling
Shell, No. 1 Bastanchury, Coyote, Orange Co.	28- 3-10	6,050	redrilling
Union Oil Co., No. 1 Richfield, Orange Co.	13- 3- 9	3,000	granite
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,910	suspended
Oil Well Eng. Co., No. 1 Newport, Orange Co.	21- 6-10	2,795	suspended
Fidelity Pet. Co., No. 1-A Murrietta, Riverside Co.	23- 7- 3	701	cleaning out
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,550	bl. sh. drilling
Imperial Valley Oil Co., Well No. 1, Imperial Co.	32-11-10	2,980	suspended
San Marcos Oil Co., Well No. 1, San Diego Co.	9-12- 3	mtl.	building rig
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	2,170	suspended
McGregor Synd., No. 1 Del Mar, San Diego Co.	17-14- 3	1,220	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12- 13- 4	2,200	sd. sh. drilling
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	30-16- 3	550	cleaning out
Grey, H. H., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,525	cleaning out
Duncan, N. I., No. 1 Mojave, San Bernardino Co.	8- 4- 6	rig	rigging up
Girard & Grimes, No. 1 Corona, San Bernardino Co.	8- 2- 8	590	sd. sh. drilling

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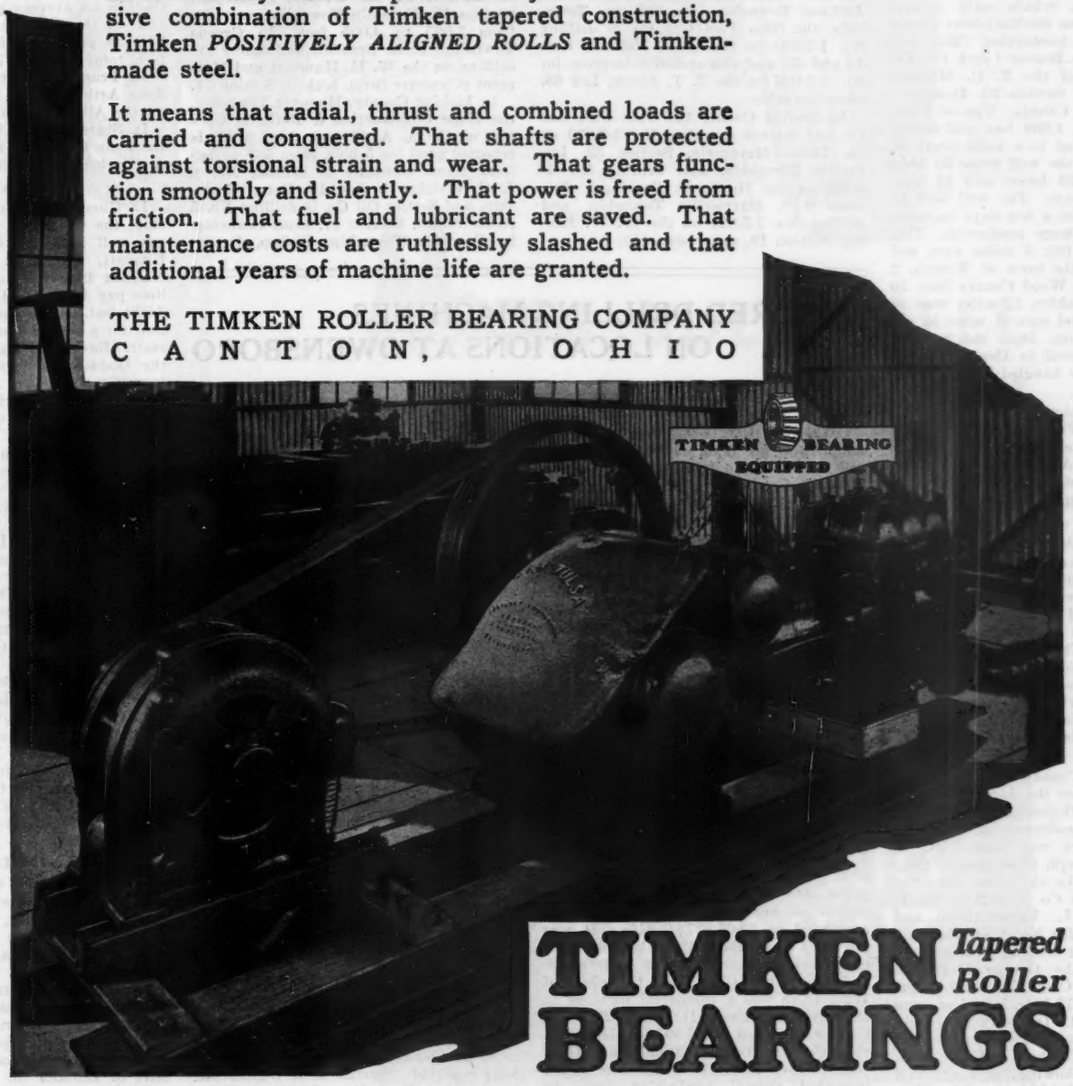


TIMKEN *Tapered Roller* **BEARINGS**

Muskingum County Has 375-Bbl. Well

Central West Field Shows Better than Average Completions. Central Ohio Division Proves Most Productive

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Feb. 24.—Some remarkably fine oil producers were uncovered in the Central West Field since the last review of this vast territory, with the Central Ohio division being the most prolific, especially in Muskingum County, which is credited with a producer above the average in No. 2 on the Sidle farm for 375 bbls. initial; No. 1 McDonald farm, 175 bbls. Licking County shows a 220-bbl. initial producer on the Wallace Davidson farm.

One of the important finds for the week was made in the old Lima Field of northwestern Ohio, to the west of previous production, which adds several miles of intervening territory that should show commercial production. This test was made by the Beaver Creek Oil Co. on the SE cor. of the T. U. McClure farm in the SW Section 26, Damascus Township, Henry County. Top of Trenton was found at 1,666 feet and drilled 80 feet in the sand to a total depth of 1,746 feet, where the well made 30 bbls. initial the first 24 hours and 10 bbls. the second 24 hours. The well will be given a shot within a few days in hopes of opening up a large production. This test is approximately 5 miles west and 1 mile north of the town of Weston, 2 miles west of the Wood County line, 10 miles north of Deshler, 12 miles west of Bowling Green, and several miles in advance of production. It is the first oil producing well found in Henry County, and the oil will be handled by the Buckeye Pipe Line Co.

No other completions were reported from the Lima Field, although several wells are due that are scattered over Seneca, Hancock, Allen, Ottawa, Mercer, Auglaize and Wood Counties.

CENTRAL OHIO

While 16 wells were completed in the Central Ohio Field for the week, but three were producers with an initial production of 550 bbls., 7 dry holes and 6 gas wells. In new work there were 10 locations made and 19 wells started drilling, a total of 29 for new work, which is encouraging. The bringing in of the well that produced 375 bbls. was the feature of the week's work and Muskingum County, which is showing some very large oil producers of late, no doubt will get a good play when weather conditions improve.

In Muskingum County the Heisey Gas Co.'s second test on the James M. Sidle farm, Section 5, Hopewell Township, is credited with a production of 375 bbls. the first 24 hours run from 3,192 to 3,249 feet, along with close around 250,000 feet of gas. In the same township the Ohio Fuel Gas Co. is drilling No. 1-4966 on the F. L. Varner farm and staked a location for No. 1 on the Sina Varner farm, same section. Crawley and others' test on the George McDonald farm, Section 3, Clay Township, same county, produced 175 bbls. initial at from 3,457 to 3,505 feet. In Perry Township the Wittmer Properties Trustee's test on the Thomas Treahey & Co.'s farm, Section 7, has a showing for a gas well at a total depth of 4,204 feet. The Clinton lime in this well was topped at 4,095 feet, and gas pay found from 4,108-30 feet and drilled to a total depth of 4,204 feet. The Atha Co. is drilling on the L. M. Bryan farm, Section 20, same township. Same company made a location on the Maud Shepherd farm, Lot 24, Union Township, same county.

In Ashland County, Montgomery Township, the Kemrow Co. brought in a nice gas well on the John L. Smith farm, Section 1, from 2,670-80 feet, while Hulse & Kundtz drilled a dry hole on the Martin H. Morr, Section 13, same township, from 2,595 to 2,601 feet. Ohio Fuel Gas Co. made a location for No. 2,5,047 on the Lola B. Smith, same section. In Mohican Township the Kemrow Co. found a dry hole in No. 5 on the George W. Garst, Section 16, from the Berea sand. In Orange Township the Ohio Fuel Gas Co.'s No. 1-4,918 Jim R. Miller, Section 23, was dry, there being no sand found. Same company made locations for No. 1-5,044 on the F. M. Lovering, Section 21, and No. 1-5,045 on the Corwin L. Mason, Sections 21-28, same township. Same company made a location for No. 1-5,043 on the Charles E. Hines, Section 11, Jackson Township. In Sullivan Township, the Ohio Fuel Gas Co. is drilling No. 1-5,020 on the C. B. Heifner, Lots 44 and 45, and also staked a location for No. 1-5,046 on the J. T. Smith, Lot 68, same township.

In Medina County the Ohio Fuel Gas Co. has started spudding No. 1-5,030 on the Delno Marquette, Section 32, Lafayette Township, also drilling No. 1-5,002 on the Hattie V. Bensinger, Sections 9-18, Harrisville Township, and drilling No. 1-5,021 on the W. W. Kindig, Section 19, same township.

In Lorain County, Carlisle Township, the Ohio Fuel Gas Co. has a nice gas well in No. 1-4,949 J. D. Diedrick farm, Lot 13, and made a location for No. 1-5,042 on Carl Diedrick's farm, Lot 18. The Daugherty Co. is drilling on the J. M. Strong, Lot 18, same township. In Ridgeville Township, the Kemrow Co. is drilling on the R. C. Bailey, Lot 46, and William Dempsey is drilling on the Joseph Snyder, Lot 32, same township.

In Holmes County, Richland Township, East Ohio Gas Co. made a location on the P. E. Ducy, Section 15.

In Coshocton County, Crawford Township, the Ohio Fuel Gas Co. has a gas well in No. 1-4,788 Lester Pretzno, Section 6, at from 4,116 to 4,190 feet.

Summitt County

In Summitt County, Pfeifer and others' second test on the W. and C. Kepler, Section 13, Franklin Township, was dry from 3,995 to 4,005 feet. In Greene Township, F. A. Brendall and others are drilling on the W. H. Humbert and Margaret Silknetter farm, both in Section 31.

In Licking County, Hanover Township, the Hope Construction & Refining Co.'s test on the A. A. Strasel, Section 13, is reported good for 5 bbls. from 537 to 549 feet. Same company is drilling No. 6 J. C. Wright, Section 15, Perry Township, and Settles Oil Co. is drilling No. 5 Nellie Smith, Section 17, same township. In Franklin Township, Bishop, Deetry and others are drilling No. 3 on the James B. Watson.

In Athens County, Lodi Township, the Fairfield Oil & Gas Co. is drilling on the Sam Jeffers farm, fractional Section 34. In Dover Township, Kachelmacher Estate's test on the Millfield Coal & Mining Co., Lot 5, is dry in the Clinton from 3,889 to 4,139 feet.

In Meigs County, Tyree and others' second test on the Holter farm, Section 13, Sutton Township, is a dry hole in the Berea sand from 1,829 to 1,843 feet, total depth 1,847 feet.

In Tuscarawas County, Oxford Township, Phillips and others' test on the Ellen M. Couts, Section 21, failed to show commercial production in the Berea sand at 1,198 feet, and is drilling deeper. In Washington Township the Gordon Oil Co. has an average gas well at a second test on the T. B. and R. Shearer, Lot 34, the pay being found from 3,569-70 feet, total depth 3,572 feet.

In Trumble County, Mecca Township, John Arthur drilled a dry hole in No. 2 on the Albert F. Rust farm.

In Stark County, Lawrence Township, the Penn Oil & Gas Co. is drilling on the A. Ginther, Section 3.

Guernsey County

In Guernsey County, Wheeling Township, the Ohio Fuel Gas Co. has a fair gas well in No. 1-4,911 on the Simon Umstatt, Section 2. In this well the Niagara lime was topped at 3,421 feet, lime pay from 3,590-99 feet, total depth 3,600 feet. Same company made a location for a second test on the Simon Umstatt. East Ohio Gas Co. is drilling on the Goad-Keith farm, Section 1, same township.

In Belmont County, Norwood P. Johnson made a location on the Chalmer Hendershot, Section 23, Richland Township, and Shay McMullen is drilling on the Edward Miller, Section 19, Somerset Township.

In Morgan County, the Ohio Fuel Gas Co. has a fair gas well in No. 1-4,942 on the D. L. Olney, Lot 4, Marion Township, in the Salt sand from 781 to 836 feet. Same company is drilling a second test on the W. P. Chappelear farm, Section 26, Malta Township.

In Licking County, Fallsburg Township, the Ohio Fuel Gas Co. made an excellent oil strike in No. 1-4,965 on the Wallace Davidson, Section 13, which had an initial of 220 bbls.

In Clay Township, Muskingum County, William Kline and others' No. 3 on the Ramsbottom Pottery land, Section 3, produced 75 bbls. the first 24 hours.

Co-operative Oil Co.'s No. 1 Robert Melson, Section 4, Knox Township, Vinton County, estimated good for around 3 bbls. initial.

INDIANA

A well far above the average was developed in southwestern Indiana when C. C. Taliaferro, Jr., drilled in his No. 3 well, 150 feet from the south line and 750 feet from the east line of the Mary McAtee farm, SW, Location 12, Clay Township, Pike County, with an initial production of 225 bbls. Sand was topped at 1,012 feet and drilled 5½ feet in the sand to a total depth of 1,017½ feet. This is the best producer found in any part of Indiana for a long period, and will bring about more active development in the immediate vicinity of the gusher. No. 4, same lease, will start at once. William Bell and others are drilling a second test on the Berkley Hill farm, Location 31, Madison Township, same county.

A dry hole is reported from the Goose

(Continued on Page 182)

HUNDRED DRILLING MACHINES ON LOCATIONS AT OWENSBORO

By Whit
Staff Correspondent, Kentucky-Tennessee

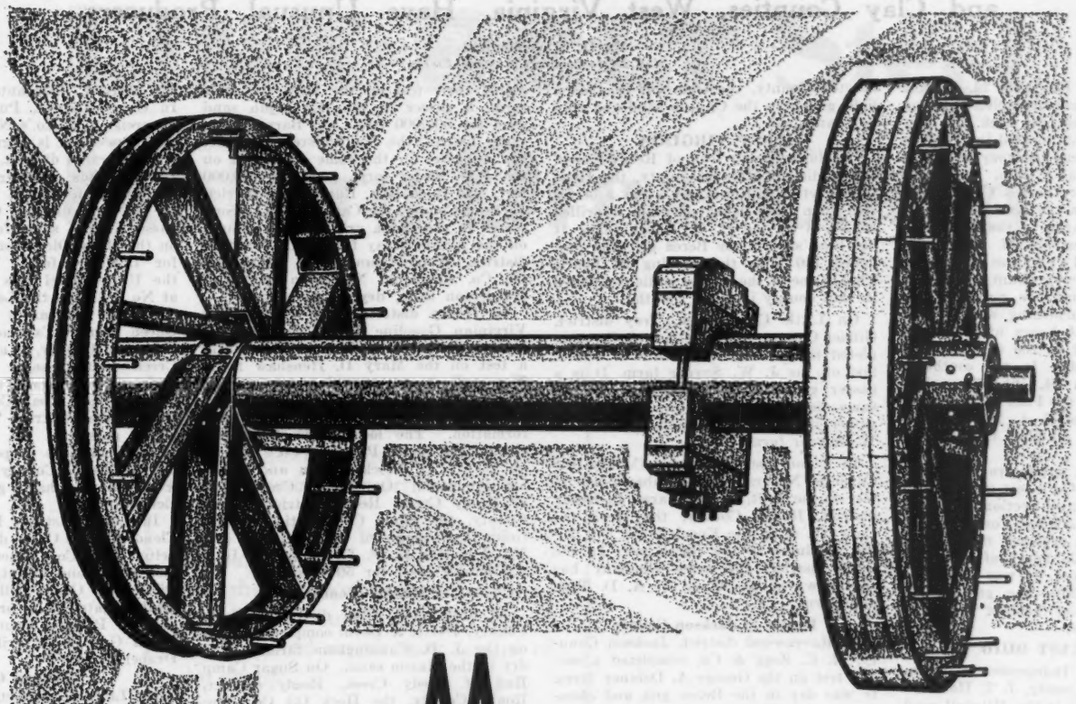
OWENSBORO, Ky., Feb. 24.—Few completions are reported from Kentucky, and those were only offsets, as the 60-day shut-down came to a close Saturday, February 15. If weather conditions are such that work can be done in the field the next couple of weeks will show great activity and by the close of the month operations should be back in full swing, if not more active than before the starting of the shut down. There are from 75 to more than 100 drilling machines that are on locations or ready to move. Most of the operators have expressed themselves as looking forward to the coming spring and summer as the busiest since the field opened.

The Owensboro Field has made wonderful strides during the past 8 years, for back in 1922 the daily production of the Tri-County Field, comprising Ohio, Daviess and Hancock Counties, produced for the entire year only 3,890.13 bbls., according to figures given out by Dr. Jillson, Kentucky's state geologist. From 1922 the annual production grew at a rapid rate until 1929 when the annual output of crude in the three counties amounted to 3,866,897.89 bbls. It was not until along about 1926 that the three counties commenced to show their worth and from that time until the close of 1929, there was a wonderful increase in the three counties. During 1929, Ohio County produced 2,866,897.89 bbls.; Daviess County 1,065,833.20 bbls., and Hancock County 15,019.75 bbls. The larger increased annual production came in 1928, with an increase over 1927 of 1,302,243.71 bbls., and the increase of 1929 over 1928 amounted to 1,167,332.23 bbls., or 2,469,575.94 bbls. over the amount produced in the three counties.

Ohio County

In Ohio County, in the Buford Pool, several miles west of the Ambrose-Weller Pool, the Kemrow-Cumberland Petroleum test on the S. J. Lloyd farm, midway between the town of Buford and the Barnett's Church Pool, is reported good for 200 bbls. initial at a depth of 620 feet. Same company's test on the Ernest Patton 50 acres, midway between the big well on the Lloyd farm and the Barnett's Church Pool, is good for 60 bbls. initial at 590 feet, both wells getting their oil in the Stray sand. In the same county, in Whittaker Field, James C. Ellis drilled a test 600 feet from the north line and 250 feet from the west line of the Clarence Ford farm, getting a dry hole. James C. Ellis and others' second test on the G. M. Burdette 63 acres, 200 feet from the south line and 640 feet from the west line of the farm, produced an initial of 35 bbls. P. A. Stevens and others' No. 1 H. Biven farm, in the northwest corner of the lease, was dry. D. J. White and others are drilling No. 6 on the Earnest Bickett 90 acres, where some nice oil wells have been found. Boop & McDonough are drilling No. 1 C. W. Newton farm, and J. H. McClurkin and others are drilling No. 1 G. Roby farm, all in Ohio County. In the Haynesville area, the Louisville Gas & Electric Co. is drilling on the Knott farm, and C. A. Dally, Pittsburgh operator, is drilling No. 1 on the W. P. Crow farm, same field.

Daviess County did not fare so well as Ohio County, as nothing but dusters were reported. Southwest of Whitesville, in the Jones Pool, Bane & Ogle drilled a dry hole in the southwest corner of the Frank Barrett farm. Jetsan Oil Co. also got a duster in a second test in the northwest corner of the W. V. Lewis farm, and the Imperial Oil & Gas Products Co. hit a dry spot 200 feet from the north line and 600 feet from the east line of the Howard Wright farm.



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The ruggedness and long life of the Moore Steel Bull Wheel are the results of extra strength supplied at every point of wear and strain. The heavy shaft is heated and shrunk over the gudgeons. The latter are securely riveted in place. The spokes are tangent to the shaft and exert a direct push on it. To give maximum pulling power, the tug rim is of one piece rolled steel with a double V groove. The Moore Bull Wheel conforms to A. P. I. dimensional standards and is field proven equipment.

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Stocks in All Principal Fields

Perry County Well Makes 200 Barrels

Licking County, Ohio, Test Flows 221 Bbls. Second 24 Hours. Roane and Clay Counties, West Virginia, Have Unusual Producers

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Feb. 24.—Fewer and lighter wells were completed during the past week. The best was located in the deep sand territory in Southeast Ohio, McClay Brothers & Co.'s No. 5, on the Karl W. Brown farm, in the northwest quarter of Section 4, Harrison Township, Perry County, a section that has recently been furnishing some good wells. The first 24 hours after it was completed and shot in the Clinton sand it produced 200 bbls. In the southeast quarter of Section 24, Pike Township, Coshocton County, the Pure Oil Co. completed No. 6 on the F. A. Moore & Co. farm. It produced 50 bbls. the first 24 hours after shot.

One of the best producers completed is the Preston Oil Co.'s test on the William Davidson farm, in Section 13, Fallsbury Township, Licking County. This well was a natural producer that flowed 75 bbls. the first 23 hours after drilled into the Clinton sand. It was then shot and flowed 221 bbls. the ensuing 24 hours. This is among the best producers completed this year.

SOUTHEAST OHIO

In Section 35, Independence Township, Washington County, J. T. Hall and others have a duster in the Mitchell sand on the Isaac Felter farm. In Lot 92, Athens Township, Athens County, Gross & Frebault have a Berea grit duster on the Nellie H. Vanvorhees farm. In Independence Township, Washington County, Herman Schramm & Co. started to drill on the J. H. Ward farm.

In the southwest quarter of Tuscarawas County, on Lot 34, the Gordon Oil Co. completed in the Niagara lime a second test on the Thomas Shearer farm. It is a fair gasser. In the northeast quarter of Section 4, Harrison Township, Perry County, McClay Brothers & Co. completed and shot in the Clinton sand a test on the Faye Melick farm. It produced 50 bbls. the first 24 hours.

Muskingum County

In the northwest quarter of Section 3, Clay Township, Muskingum County, William Cline and others completed and shot in the Clinton sand No. 3 on the Harrison Ramsbottom farm. It produced 75 bbls. the first 24 hours. In the southeast quarter of Section 24, Pike Township, Coshocton County, the Pure Oil Co. completed No. 6 on the F. A. Moore & Co. farm. It produced 50 bbls. the first 24 hours.

In the southwest quarter of Section 7, Perry Township, Muskingum County, the Wittmer Oil & Gas Properties completed and shot in the Clinton sand a test on the Thomas Treahany farm. It is a gasser good for 400,000 feet. In the same township and county, the Preston Oil Co.'s second test, on the John C. Hicks farm, is a light gasser in the Clinton sand. In Section 13, Hanover Township, Licking County, the Hope Construction & Refining Co. has a very light pumper in the Clinton sand at No. 4 on the James Settles farm.

In the southeast quarter of Section 24, Pike Township, Coshocton County, the Pure Oil Co. completed and shot in the Clinton sand No. 6 on the F. A. Moore & Co. farm. It produced 50 bbls. the first 24 hours. In the northeast quarter of Section 4, Harrison Township, Perry County, McClay Brothers & Co. completed in the same formation No. 4 on the Karl W. Brown farm. It produced 20 bbls. the first 24 hours.

In Section 34, Clarke Township, Coshocton County, the Ohio Oil Co. has a light gasser in the Clinton sand and may be abandoned.

WEST VIRGINIA

On Sugar Camp Run of Reedy Creek, Reedy district, Roane County, the Hope Construction & Refining Co. has a better well than first indicated when it drilled in No. 3 on the H. F. Enoch farm. It has been shot in the Berea grit and produced 140 bbls. the ensuing 24 hours. This is one of the largest wells completed in that county in many months.

On Little Cove Creek, Troy district, Gilmer County, C. M. Bennett & Co. completed in the Big Injun sand a second test on the J. W. Snyder farm. It is a gasser good for 2,500,000 feet. In the same district, J. E. Trainer completed a gasser in the same formation on the J. W. Snyder farm.

In Union district, Ritchie County, the Carnegie Natural Gas Co. abandoned its test on the T. R. Vincent farm. In Reedy district, Roane County, the Heck Oil Co.'s No. 4, on the Enoch farm, is a 25-bbl. producer in the Berea grit. In the same district, the same company has shut down at No. 6 on the A. D. Tallman farm.

Duster in Jackson County

In Ravenwood district, Jackson County, H. C. Zogg & Co. completed a second test on the George A. Delaney farm. It was dry in the Berea grit and abandoned. In Sheridan district, Calhoun County, the United Fuel Gas Co.'s No. 4,074, on the Everet Proudfoot farm, is a 5-bbl. pumper in the Big Injun sand.

In Chapmanville district, Logan County, the Big Creek Gas Co. completed a gasser on the Lydia M. Belvine farm. In Barboursville district, Cabell County, the United Fuel Gas Co.'s No. 4,032, on the A. B. Childers farm, is a gasser. In the same district, the same company completed No. 4,304 on the A. B. Childers farm. It is a duster. In McComas district, the Hamilton Gas Co. has a gasser at No. 97 on the H. E. Stone farm. In Scott district, Boone County, the Owens Bottle & Machine Co. has a gasser in the Berea grit on the Cora Barker farm.

Boone County

In Sherman district, Boone County, Means & Banks are drilling a test on the B. D. Banks farm. In Henry district, Clay County, the United Fuel Gas Co. has a rig up on the Swan, Goshorn & Goshorn tract. On the same tract the company has made another location. In Kanawha district, Fayette County, G. L. Cabot is fishing on the J. M. Payne farm. In Jefferson district, Nicholas County, the Hope Construction & Refining Co. has material at a location on the Lewis Land & Coal Co.'s tract. In Marsh Fork district, Raleigh County, the United Fuel Gas Co. is drilling on the Edward J. Berwind farm. In Williamsburg district, Greenbrier County, the Thompkins-Harris Co. is drilling on the Samuel Bickel farm. In Clendenin district, Mason County, the Federal Fuel Corp. is due in the sand on the John Hanley farm.

On Sugar Tree fork, Union district, Lincoln County, the South Penn Oil Co. has the rig completed and started to drill on the John W. Egnor farm, 800 feet northwest of the company's No. 8 on the L. E. and E. B. Holstein farm, drilled a number of years ago. In Sherman district, Calhoun County, the Virginian Gasoline & Oil Co. has the rig completed for No. 4 on the Evert Proudfoot farm.

Calhoun County

In Lee district, Calhoun County, in the village of Hur, Smith & Bickel, completed their test on the Hess Reynolds farm, a gasser in the Big Injun sand good for 500,000 feet. On Barnes Run, same district, the Southwestern Gas Co. has a gasser in the same formation on the John Slider farm, good for 750,000 feet. On Buck Run, Ravenwood district, Jackson County, the Capitol Oil Co. completed in the Berea grit a 5-bbl. pumper on the Arthur Gray farm. In Williams district, Wood County, the Henderson Oil Co. completed No. 4 on the J. J. Henderson farm, dry in all sands.

In Henry district, Clay County, the Virginian Gasoline & Oil Co. and the United Fuel Gas Co. completed jointly a test on the Mary D. Henshaw farm. The well is a natural producer and placed 120 bbls. to its credit the first 24 hours after drilled into the Big Lime formation. The location is 4,500 feet east of the South Penn Oil Co.'s No. 99 on the O. D. Stockly farm and shows an extension. On Sugar Creek Run of Reedy Creek, Reedy district, Roane County, the Hope Construction & Refining Co. completed in the Berea grit No. 3 on the H. F. Enoch farm. It is a producer good for 50 bbls.

Ritchie County

At Mole Hill, Clay district, Ritchie County, Devitt & Devol completed a test on the J. B. Cunningham farm. It is dry in the Maxon sand. On Sugar Camp Run of Reedy Creek, Reedy district, Roane County, the Heck Oil Co. completed in the Berea grit No. 6 on the W. H. Enoch farm, showing for a natural producer good for 20 bbls.

On Skeleton Run, McClellan district, Doddridge County, the Skeleton Oil & Gas Co. has drilled its test on the A. F. M. Lyons farm through the Gordon sand. It is good for 5 or 6 bbls. a day. On Jacobs Run, Ten Mile district, Harrison County, the Dennison-Varner Oil & Gas Co.'s second test on the Allen Varner heirs' farm is good for 8 bbls. On Big Branch, Duval district, Lincoln County, the Guyan Oil Co.'s No. 54 on the Lincoln County Land Association's property is good for 5 bbls. in the Berea grit.

In Henry district, Clay County, the South Penn Oil Co. completed in the Big Injun sand No. 8 on the James Phillips farm. It is showing for a 12-bbl. pumper after shot.

In Malden district, Kanawha County, the Ten Mile Oil & Gas Co. completed in the Big Injun sand No. 9 on the H. C. Dickinson farm. It is a gasser. In Cabin Creek district, the Pure Oil Co. completed in the Berea grit No. 246 on the Williams Coal Co.'s tract. It is a natural producer good for 5 bbls.

In Creek district, Boone County, the Martha Oil & Gas Co. has a gasser on the R. L. Price, Sr., farm. In the same district the Yawkey Oil & Gas Co.'s No. 13 on the Pond Fork Coal Co., Ltd., has a gasser in the Berea grit. In the same district, G. L. Cabot has a gasser on the J. W. Thompson farm.

Logan County

In Logan district, Logan County, the Thompkins Fuel Co. has a dry hole on the J. H. Barker farm. In Harvey district, Mingo County, the United Gas Co. has a gasser at No. 30 on the same company's property. In the same district and county, the Red Jacket Oil & Gas Co. has a gasser at No. 11 on its own property.

In Sheridan district, Calhoun County, the Chemical Oil Co.'s test on the A. T. Yoke farm is a gasser in the Salt sand. In Center district, Gilmer County, the McCall Drilling Co.'s test on the E. B. Baker farm is a gasser in the Big Injun sand.

The Crescent Oil Co.'s test on the Catherine Oklowander farm, in Washington district, Pleasants County, is dry. In Curry district, Putnam County, the Sovereign Gas Co.'s No. 3 on the Sweltzer heirs' farm is a gasser.

In Sherman district, Boone County, G. L. Cabot has a gasser in the Berea grit at No. 3 on the L. M. Sutphin farm. In the same district, G. L. Cabot has a gasser in the same formation at No. 3 on the Mary Dickinson farm. It is good for 1,280,000 feet. In Crook district, the United Fuel Gas Co. has a gasser at No. 1,877 on the Louis F. Chew farm. The same company's No. 3,964 on the Queen Land Co.'s tract, in Elk district, Kanawha County, is a gasser. In Cabin Creek district, same county, the same company has a gasser at No. 2,965 on the Numa Black Coal Co.'s property. In Cabin Creek district, the same company has a gasser at No. 3 on the Sunday Creek Coal Co.'s property. In Peytonia district, Boone County, the Owens Bottle & Machine Co. has a gasser on the L. F. Echols farm.

In Logan district, Logan County, the Clendenin Gas Co. is drilling on the Cannelton Coal Co.'s tract. In Washington district, Boone County, the Pond Fork Oil & Gas Co. is drilling on the Crane Real Estate Co.'s property. In Scott district, Putnam County, the Reishman Oil & Gas Co. is drilling on the J. O. Draper farm.

Wayne County

In Lincoln district, Wayne County, the Wayne United Fuel Co. has three rigs up on the A. W. Wilson farm. There is more work under way in Wayne County than for many months. On Sugar Camp Run of Reedy district, Roane County, the Hope Construction & Refining Co. completed in the Berea grit No. 3 on the L. Vandal farm. It is a 5-bbl. pumper.

In Liberty district, Marshall County, the Marshall-Preston Oil & Gas Co. has moved the rig at its test on the Belle Clark farm. In Church district, Wetzel County, the Stewart Oil & Gas Co. is drilling on the George E. Stewart farm. In the same district, Cochran & Cochran are rigging up on the E. T. Hoge farm. In the same district, Moorhead & Butche are rigging up on the W. J. Tracey farm.

In Grant district, Ritchie County, David French and others have a rig up on the B. F. Gilmore farm. In the same district, the Hope Natural Gas Co. is rigging up on the Elizabeth Cain farm. In Grant district, Doddridge County, local parties are drilling on the T. R. Spencer farm. In Williams district, Wood County, Riggs & McCline are due in the sand on the J. B. Henderson heirs' farm. In Grant district, Ritchie County, H. N. Rinehart has started to drill on the Daniel Donley farm.

SOUTHWEST PENNSYLVANIA

In Perry Township, Greene County, the Peoples Natural Gas Co. completed No. 3,575 on the Kiger heirs' farm. It is dry in the Bayard sand. In Jackson Township, the Carnegie Natural Gas Co.'s test on the G. N. Rinehart farm is a gasser in the Big Injun sand.

In Moon Township, Allegheny County, Bell, Gross & Co. have completed a second test on the Mrs. K. E. Dally farm. It is good for 4 or 5 bbls. a day in the Gordon sand. The location is 800 feet south of the first test on the same farm.

DREW AIMS FOR U. S. SENATE

BRADFORD, Pa., Feb. 22.—Webster G. Drew, tank gauging engineer and city treasurer of Bradford, announces that he will be a candidate for the Republican nomination for United States Senator on a platform opposed to the corporations.

LINK-BELT Steel Rotary Drive Chain

LINK-BELT "SS" Class Rotary Chains are designed to withstand the continuous and terrific strains of the present-day drilling rigs.

The chains are provided with the famous Link-Belt "Curled Rollers," the shock-absorbing resilience of which is an invaluable element in the long and satisfactory service of the chain.

Specify Link-Belt Chains. The double arrow trade >——< mark on every link identifies genuine Link-Belt.

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

CAPACITY OF COMPRESSORS

Air compressors are rated by the manufacturers according to their piston displacement in cubic feet per minute. Does this mean the quantity of air which is compressed by the machine? I wish you would tell me how calculations are made to determine the size of the compressor required to perform given work?—S. D. R.

The sizes of air compressors are rated by manufacturers in their catalogs in terms of piston displacement in cubic feet per minute, but this should not be taken to mean the actual capacity of the machine. The capacity of an air or gas compressor is defined in the "Trade Standards" of the Compressed Air Society as the actual amount of air or gas compressed and delivered, expressed in cubic feet per minute at intake temperature and pressure, the delivery measurement to be as actually made by low-pressure orifice test. The discharge pressure, the number of stages of compression and the altitude at which the compressor is to work have a direct effect on the capacity as compared with the displacement.

The pressure for which air compressors are rated, according to the "Trade Standards," is the discharge gauge pressure in pounds per square inch. Unless otherwise specified the inlet or atmospheric pressure is assumed to be 14.7 pounds per square inch absolute. Absolute pressure (gauge pressure plus the atmospheric pressure) is necessary in compressed-air calculations, but it is not given in trade catalogs.

In making calculations to determine the size compressor required to provide air for a given number of tools the figures should be based on the actual capacity of the compressor, which can be obtained direct from the manufacturer.

AIR OR GAS IN REPRESSURING

It is evident that either natural gas or air may be used in repressuring operations, but gas seems to be used much more than air. This strikes me as peculiar, if one is as good as the other for this purpose, since you can get air anywhere without any expense. If the gas is better for any reason than air will you explain why, please?—T. S. T.

Among the various gases that might be used in repressuring operations air is the least desirable in two important particulars, namely its degree of solubility in oil and the extent to which it decreases the viscosity of the fluid which it is desired to raise to the surface. The two greatest points in its favor are the ones you mention, the fact that it is available anywhere on the face of the globe and the fact that it is free to all.

Not only is air less soluble in crude oil than natural gas and less effective in reducing the viscosity of the underground crude, but it is believed probable that it oxidizes the crude, to that extent acutally increasing the oil's viscosity and leaving a residue in the sand which tends to clog the pores.

It has been shown in some instances that introduction of air into a well resulted in corrosion of the casing and tubing through the action of oxygen brought into contact with moisture, and this action is accelerated when sulphur compounds are present in the formation. Furthermore, air introduced into the sand under certain conditions forms an explosive mixture, making the gas produced unfit for field purposes.

These conditions mainly govern the use of gas for repressuring and the fact that this gas is usually enriched in gasoline content as it is passed through the oil sands makes it profitable to utilize it for treatment in the natural casinghead gasoline plants, and while the gravity of the oil may be somewhat reduced through this scavenging effect of the gas passing through it a good part of this loss can be made up by crediting the gasoline recovered to the production from the lease in question.

A. W. Buell, of the Midwest Refining Co., reports on solubility of gases and effect of dissolved gases on viscosity and volume of oil as follows:

	Oil Viscosity		Oil Volume		Solubility
Kind of gas—	% decrease	% increase	% increase	% decrease	cu. ft. per bbl.
Air	2.6	....	....	2.4	2.59
Flue gas	...	4.3	....	3.3	3.45
Carbon dioxide	0.5	....	....	1.5	22.75
Fuel gas	10.0	....	....	0.5	13.25
Weathering plant vapor	40.3	....	12.0	....	62.00

In this tabulation determinations were made at a temperature corresponding to 100° F. and at pressures of 50, 100, 150, 200 and 250 pounds per square inch. As the results obtained at 50 pounds most closely apply to present sand conditions (Second Wall Creek sand, Salt Creek Field, Wyoming) these results are given in the table, with the 50 pounds compared with atmosphere; viscosity in Saybolt; volume is that of the oil when saturated with gas at 50 pounds, and solubility refers to the quantity of gas dissolved in a barrel of oil at the pressure mentioned.

Mr. Buell points out that gases are beneficial in direct proportion to the volume absorbed in crude oil. Their effect on the oil and the presence or absence of the effects after pressure is released are also to be considered. Some gases have a permanent beneficial effect. Others act in the opposite way. Considering all factors, Mr. Buell values the five gases named in the order in which they appear in the foregoing list, the best being placed last.

SUBSURFACE PRESSURES

Is there any definite information as to the amount of the pressure (that is, pounds per square inch) encountered in petroleum and natural gas sands? Does this pressure invariably increase as deeper strata are penetrated? Is it known beyond question just what causes this pressure?—E. E. S.

Instruments now used by production engineers determine accurately the pressure found in oil and gas wells at any place from the surface of the ground to the bottom of the hole. Other instruments get samples of the gas or oil or both as they are produced and permit the sample to be brought to the surface without loss of the original pressure under which the sample was taken.

This information does indicate quite definitely that pressures vary greatly in wells both with the kind of formation and depth of hole. It is also true that this pressure increases as greater depths are reached, but so far as known this pressure increase is not constant. The reason for these variations is not established definitely because it is not agreed as to what causes the pressure.

WHY WAS IT CALLED THAT?

DOGHOUSE

Almost any kind of lean-to or rough shed built onto the derrick or around the lease is called a doghouse. Its likeness to the small structures commonly provided as shelters for dogs undoubtedly gave rise to the name.

It is said that the surface of the earth is more or less plastic, which would mean that a pressure equal to the weight of the column of rock above any given point would exert pressure upon any point below it, also the pressure due to hydrostatic head of water may be brought to bear upon the producing sand. Precipitation of solids out of water that originally had filled the pore space in the sand body would tend to decrease the porosity of the sand and in this way the gas and oil would be confined into a smaller space than that which it originally occupied and in this way pressure would be imposed on it and the gas would be compressed.

Folding of formation would tend to create pressure and faulting would also have the same effect and even though this movement took place many years ago it is possible that its effect upon the gas and oil in the reservoirs would be left there until the well was drilled into the sand and released it.

With modern instruments and practice it is possible to ascertain the amount of pressure at any depth desired so it is not so important to know the forces that set up this pressure, for that may always be an open question. Man will have no means of going back into the distant past to follow all the changes that have taken place during the formation of an oil pool, and for practical purposes he does not need to know what they were. If he knows conditions as they now are he can determine his practice accordingly.

FEARS WELL'S GAS PRESSURE

There is a well being drilled, using a rotary rig, and the hole is now down practically 4,000 feet. The hole is filled with water. The operators claim the well is "breathing." I understand from that term that the water rises and lowers in the casing. They also claim they have gas in the well and they fear the well may blow itself in any time and they believe the gas pressure is responsible for this "breathing" feature.

As I understand it a hole with 4,000 feet of water in it would have approximately 2,000 pounds pressure at the bottom of the hole and the gas pressure would have to be strong enough to overcome that immense water pressure before it would blow out. I have never heard of such gas pressure and I would like to have you clear this thing up for me.—J. C. B.

Wells in the Oklahoma City and the Turner Valley, Canada, Fields and wells in many other areas have pressures in excess of 2,000 pounds per square inch. Some have been reported as having double that pressure. A 4,000-foot column of water would weigh .433 pound per foot of height, or 1,732 pounds, if the water is fresh. If salt water, with a saturation equal to sea water, it would have a weight of 1,766 pounds for the 4,000-foot column.

The term "breathing" as applied to oil or water wells seems to be a new one. "Heading" or "flowing by heads" is the usual oil field term and it does so happen that many wells will accumulate oil or water in the hole until the gas has been confined long enough to build up a sufficient pressure to flow the well.

Wells are reported to have been affected by ocean tides and if this Florida well which you describe is near the Atlantic Ocean or the Gulf of Mexico and the "breathing" coincides with tide movements it might indicate that there is some subterannean connection between the bottom of the hole and the sea.

It is assumed that the well filled with water owing to hydrostatic head rather than from any gas pressure. If gas and water had occurred in the same stratum underground at 4,000 feet the normal pressure based upon the weight of the column of rock above the 4,000-foot level would be 4,320 pounds per square inch.

It would be natural to assume that the gas would occupy the upper part of the stratum and therefore would be encountered first by the drill and would immediately make its escape to the surface. The drillers in that case would have no doubt as to its presence. If, on the other hand, they had drilled into a water sand and had permitted the hole to fill with water it would hardly be probable that they would drill deeper to penetrate a second sand in which they might find gas.

Apparently this is the only way in which they could proceed with the drilling to bring about this condition, for if gas is present in a well there is evidence of it first and the water follows. Your letter seems to indicate that someone is advancing the theory that gas will now break into the hole and force the water out.

It is common practice to drown gas wells by filling them with water and when this has been done it usually requires a great deal of work to bring them back to production if they should later be required to deliver gas.

The so-called "breathing" is influenced in some way perhaps by the ocean tides, but it would require a lot of evidence to prove even this theory. A check of the conditions can be made easily and comparison made of the time intervals between "breathing" and tidal movements.

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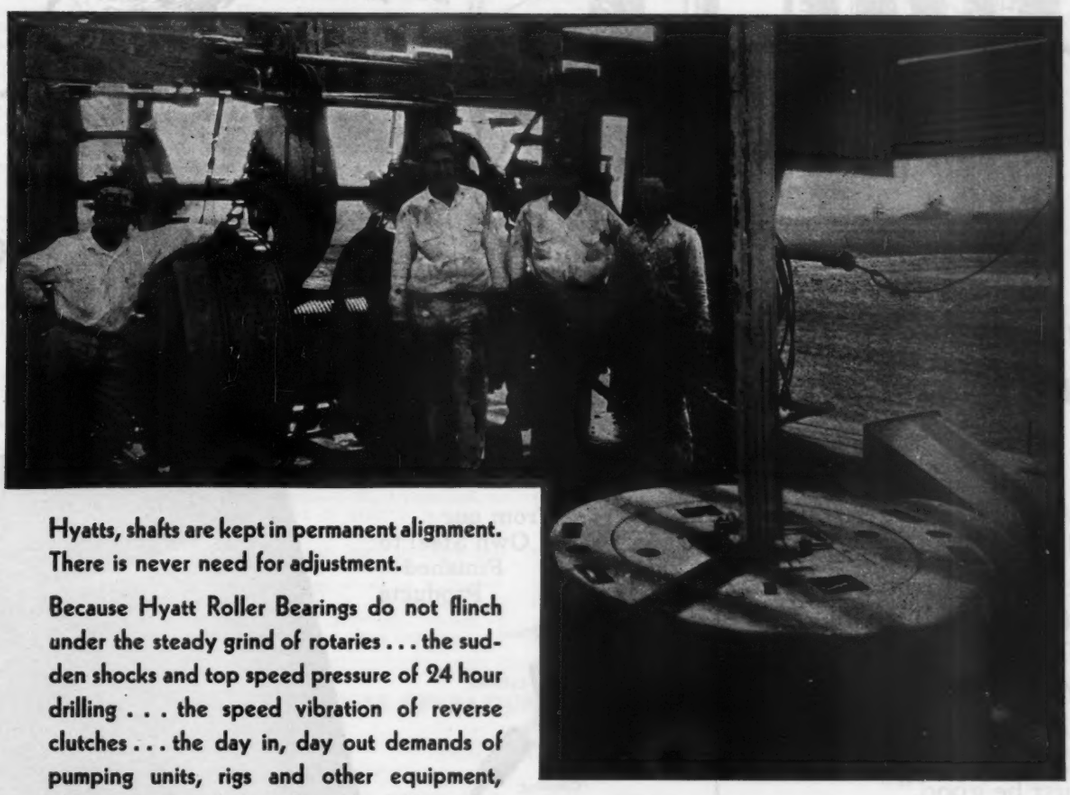

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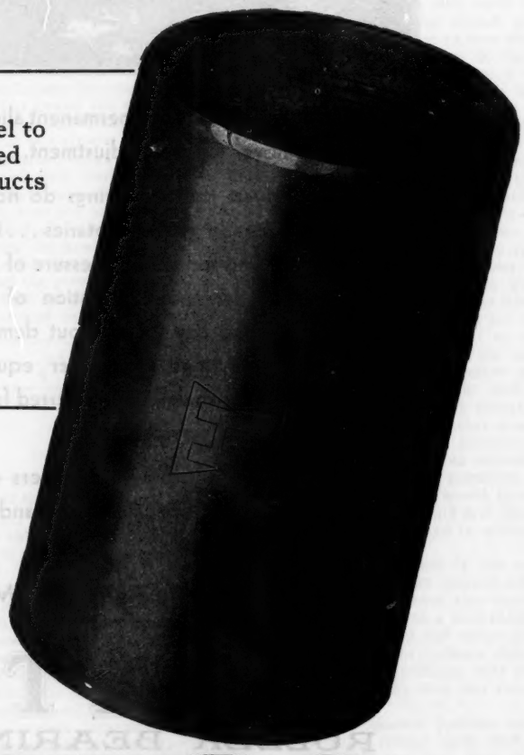

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New Deepest Producer in Big Lake Pool

Ector County Becoming the Chief Feature in the Permian Basin. Yates County Proration Remains Unchanged

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Feb. 24.—Group No. 1 Oil Corp.'s (Texon Oil & Land Co.'s) No. 1-B University, in the Big Lake Pool, Reagan County, can no longer be called the deepest producer in Texas, nor the deepest cable tool producer in the world, for this week Big Lake Oil Co.'s No. 3-C University, in the same pool, is standing at a total depth of 8,540 feet, 15 feet deeper than the former deep well. The top of the deep pay in this new well was found at 8,380 feet, and the well flowed 36 bbls. in six hours when shut down at the present total depth. The hole bridged and is now being cleaned out while the hole is loaded. It does not look to be as large a producer as the first well, but when that well first came in it only sprayed a small amount of oil with a large volume of gas, but the oil and gas has been increasing throughout the year of its production, and perhaps this second deep test will have the same characteristics, for they are but a short distance apart, surface elevation is practically the same, and the subsurface cannot be much different in the two wells.

Southern Crude Oil Purchasing Co.'s No. 1 McKenzie, located in the northeast part of Section 10, Block 604, G. C.&S.F. Survey, approximately 3 miles south of the Taylor-Link Pool, Pecos County, is still shut down at 1,497 feet after having topped a gas sand at 1,492 feet and encountering an estimated 8,000,000 feet of gas last week. It is showing a little oil with the gas and is awaiting a test.

Pecos Valley Well

The Pecos Valley Pool, in northern Pecos County, registered another well this week, a mile north of the discovery. This well belongs to Black and Dittman and is located 160 feet from the southwest and southeast lines of their lease in Section 34, Block 3, H.&T.C. Survey. The nearest producer is owned by Doran & McGee, and is located in the same section a little over a quarter of a mile to the southeast.

Black and Dittman's well topped the first gas sand at 1,475-98 feet and encountered an increase at 1,528-30 feet, striking an estimated 30,000,000 feet of gas. The oil sand was found at 1,530-33 feet, and the well shut down at the latter depth and flowed 9 bbls. an hour with 10,000,000 feet of gas on February 23, appearing as the best well in the field. The discovery well made only 112 bbls. initial at a total depth of 1,628 feet, and the nearest producer to the southeast of the Black and Dittman well made only 20 bbls. at a total depth of 1,670 feet, after being plugged back to 1,580 feet and shot with 30 quarts from 1,540-70 feet.

Yates Proration Unchanged

At a meeting of the advisory committee of the Yates Pool and the railroad commission at Austin on February 21, proration of the field was not changed to 100,000 bbls. per day, as was announced some time ago, but the companies operating in the field decided to hold the present allowance of 130,000 bbls. per day, and proration was extended accordingly.

There were 13 representatives of the Yates Pool operators present at the meeting which was held before R. D. Parker, chief supervisor, and the meeting only lasted about half an hour since most of the problems had been ironed out before the meeting took place.

It was felt that if the Yates Pool lopped off 30,000 bbls. per day that Ector County would soon make up the difference and pipe line companies in that new area would absorb this amount, and as the rest of the fields of Texas had not lowered production, and there was no other logical conservation reason for reducing the pool's output, it was decided that another six months' proration period should hold at the present allowance, extending the period from January 1, 1930. Mr. McIntyre, of the Continental Oil Co., Fort Worth, was added to the Yates Pool Advisory Committee.

Ward County Operations

In Ward County, Shell Petroleum Corp.'s No. 1 Owens, in Section 16, Block 5, H.&T.C. Survey in the Shipley Pool, continues to drill ahead at 3,870 feet in lime with 2,000 feet of fluid in the hole. On February 13 it swabbed 120 bbls. and on February 15 swabbed 70 bbls. of oil. Top of the pay in this test was found at 2,886-93 feet with an increase at 2,909 feet and another at 3,023-32 feet. This is below the Shipley pay.

Penn and Atlantic Oil Producing Co.'s No. 1 Cooper, located 330 feet from the northeast and 990 feet from the NW, Section 43, Block 34, H.&T.C. Survey, 4½ miles north of Penn and Atlantic's No. 1 Pecos Mercantile Co. (Bennett), the discovery well of this new area, started flowing sulphur water at 2,880 feet and will probably be abandoned. Penn and Atlantic's No. 2 Bennett, in Section 16, Block 34, is shut down to recement casing after encountering a show of oil and gas at 2,347 feet. Total depth is 2,353 feet. Elevation of this test is 2,579 feet.

Grand Falls Pool

Sturm and Paine's No. 1 Cummins, in Section 7, Block 32, H.&T.C. Survey, in the Grand Falls Pool, has evidently passed up the pay found in offset producing wells and is drilling at 2,222 feet. It had a showing of oil at 2,170 feet and a showing of oil and gas at 2,190 feet, but nothing substantial enough to try to produce. The offset producers are averaging between 20 and 30 bbls. per day. They were reported on in previous issues of The Oil and Gas Journal.

Grisham and Hunter's No. 1 Seay, located in the SE cor., Section 16, Block 59, Township 7, T.&P. Survey, Culberson County, attracted a little attention the forepart of last week when it encountered an estimated 5,000,000 feet of gas which was ignited by an open fire on the derrick floor, and burned down the derrick. This gas was struck at 2,995 feet, but now seems to have dissipated or to have been shut off by the bridging of the hole.

In Taylor County both producing wells of the new pool have been deepened, one not having been benefited, and the other realizing a small benefit. Adams, Ferguson and Hobb's No. 1 Lowe, in Section 19, Block 120, Guadalupe County School Lands, was deepened 45 feet to 2,435 feet, going out of the sand at 2,391 feet into lime. This well was not benefited by the deepening. Dunnigan and Shell Petroleum Corp.'s No. 1 French, to the north of the above named well, was deepened 10 feet to 2,403 feet, tubing was run with a packer on the bottom and the well flowed 110 bbls in 24 hours through the tubing.

Ector County Big Feature

Ector County is the featuring county of the Permian Basin now with 18 locations and tests being drilled and others contemplated and some announced. Gibson and Johnson of Fort Worth will drill a well in the C E half NE, Section 4, Block 15, Public School Lands, the contract calling for a 4,000-foot test to be spudded by March 1 unless an extension is granted. Out of the 16 wells drilling in the Penn Pool 8 belong to Humble, 3 to the Landreth Production Co. and 2 to the Cosden Oil Co.

The Cosden Oil Co. is contemplating enlarging its Big Spring refinery to twice its present size of 10,000 bbls., this enlargement being based on a large potential supply of oil from Cosden's wells and potential producing acreage in the Penn Pool. The oil will be run from these wells through a gathering line into Magnolia's line which runs about 10 miles north of the Penn Pool and past Big Spring, and Cosden will take the oil from Magnolia at Big Spring for its refinery. Carrying charges will be paid to Magnolia for this transportation, but no fixed price has been announced at the present time.

The Llano Oil Co.'s No. 1 Midland National Bank test, in the NW cor., Section 18, Block 44, Township 3s, T. &P. Survey, 1 mile southeast of production in the Penn Pool, will probably be completed during next week for it is now down 3,420 feet drilling in lime and anhydrite. This well is being closely watched as a possible extension well to the pool.

The Taylor-Link Pool, Pecos County, is still under the 1,000,000-bbl. mark in production, and is now producing a daily average of around 6,000 bbls. of which the Shell Pipe Line Co. is running about 4,500 bbls. through its 8-inch to McCamey, and the Humble Pipe Line Co. transporting the remainder through its 6-inch to the same terminal point. There are 60 producing wells in the field to date, about a fourth of them showing water.

WEST TEXAS PRODUCTION
Week ending February 22

County—	Wells	Prod.
Andrews County	1	200
Crane County	334	36,415
Crockett County	47	1,315
Fisher County	7	1,140
Ector County	8	1,145
Garza County	5	45
Glasscock and Howard	483	37,855
Jones County	73	2,125
Loving County	20	1,345
Mitchell County	143	2,305
Pecos County	413	137,148
Reagan County	253	16,890
Runnels County	3	15
Scurry County	5	18
Upton County	252	9,060
Ward County	23	1,665
Winkler County	607	89,480
Total this week	2,677	338,666
Total last week	2,659	339,210
Difference	18	544

Proration for Ector

The Penn Pool in Ector County will no doubt come under some form of proration within a couple of months if locations continue to be made and more producing wells are added. The present producers are now pinched in to but a small amount of their potential and as soon as Burford's 4-inch line and Magnolia's 6-inch line start taking oil some of the wells will probably be opened and allowed to flow accordingly for the Burford line will be able to accommodate around 8,000 or 10,000 bbls. per day and Magnolia's line around 12,000 bbls. per day, while Gulf's line, the first to connect in the field, can run around 3,000 to 4,000 bbls. although Gulf may not desire that much from the field. If Humble's proposed line is run to the south to connect with its 10-inch carrier from Winkler to McCamey that will be another outlet capable of transporting around 15,000 bbls. per day. With all of these lines in the field it begins to look as if the Penn Pool might be thrown open to fast and furious drilling, dumping more oil on the glutted market. It is a pool which now appears to have major importance, with possibilities of much larger wells than are now producing, and prospects for holding down drilling and production are rather small unless the Railroad Commission steps in and takes a hand in regulating drilling, and the operators agree on prorating the producing wells. It appears to be formulating another problem in the Permian Basin for overproduction sta-

(Continued on Page 154)

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended February 17

Company, farm and location—	Remarks—
ANDREWS COUNTY	
Deep Rock Oil Co. et al's No. 1 Mathis, 990 ft. from S and W, Sec. 4, Blk. A-46, Public School Land	Bldg. rig.
Deep Rock Oil Co.'s No. 1 Miles, 990 ft. S, 1,650 ft. E of NW cor. Sec. 22, Blk. A-46, School Land	Location.
Deep Rock Oil Co.'s No. 1 Ogden, 2,310 ft. E, 330 ft. S, Sec. 6, Blk. A-46, Public School Land	Top pay 4,345 ft.; top lime 4,050 ft.; averaging 200 bbls. per day; total depth 4,428 ft.; est. 200 ft. water in hole 4,414-28 ft.
Fuhrman Pet. Corp.'s No. 1 Ford, 440 ft. from S and 2,200 ft. from W of Sec. 16, Blk. A-43, Public School Land	Location.
Deep Rock Oil Co. et al's No. 1 King, 330 ft. from N and 2,310 ft. from E, Sec. 11, School Blk. A-46	Drlg. 350 ft., red rock.
BORDEN COUNTY	
Moncrief et al's No. 1 Munger, 1,980 ft. from N and E, Sec. 15, Blk. 31, Twp. 4-N, T.&P.R.R. Sur.	Fishing 2,700 ft.
Phillips et al's No. 1 Goode, 330 ft. N and E of SW cor. SE of Sec. 46, Blk. 33, Twp. 4n, T.&P.R.R. Sur.	Location.
Teas & Wheeler's No. 1 Long, 1,320 ft. N and E of Sec. 27, Blk. 30, T.&P. Sur.	Top salt 1,080 ft.; shut down 2,540 ft.
BREWSTER COUNTY	
E. W. Bateman et al's No. 2 Nevill, 2,000 ft. S and W line of Sec. 62, Blk. 13, G.H.&S.A.R.R. Sur.	Shut down 3,002 ft.
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	Fishing 1,935 ft.
Forrest Oil Co.'s No. 1 Skinner, C SW SE, Sec. 100, Blk. 2, G.C.&S.F. Sur.	Drlg. 1,150 ft., lime.
Trans-Pecos O. & G. Co.'s No. 1 Jones, 920 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.&S.F. R.R. Sur.	Shut down 1,850 ft.
Van McPhail's No. 1 McIntyre, SE cor., Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,740 ft.
COKE COUNTY	
Cates & Fitzhugh's No. 1 Mimms, 660 ft. N and W of SE cor. Sec. 39, Blk. W, T.&P.R.R. Sur.	Location.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Shut down 2,892 ft.
Mid-Kansas Oil Co.'s No. 1 W. E. Lackey, 330 ft. N and E of SW cor., Sec. 272, Blk. 1-A, H.&T.C. Sur.	Pay 3,755-56 ft.; total depth 4,250 ft.

(Continued on Page 114)

Carson County Wildcat Opens Pool

Makes 2,165 Bbls. Initial 11 Miles From Nearest Production. First Good Well South of Granite Ridge

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Feb. 24.—The greatest feature of the Panhandle for some time, Empire Gas & Fuel Co.'s No. 1 Fields, a rank wildcat in Section 13, Block 7, I.&G.N. Survey, Carson County, was completed this week for an initial production of 2,165 bbls. in 24 hours from total depth of 3,232 feet. Top of the pay of this splendid discovery was encountered at 3,220 feet. It is the first good well south of the granite ridge and opens up a pool 11 miles from the nearest production, promising a vast potential for its owners for Empire owns many sections surrounding the well. Cockrell-McIlroy Oil Co. has already made a location for a test on its acreage in Section 11, Block 7, H.&G.N. Survey, a mile northwest of the Empire discovery well, and other tests on nearby acreage may be expected to be announced immediately. A line will be run from the Empire well to the Santa Fe a few miles to the south and the oil shipped out by way of tank cars from a loading rack.

Robertson and Devore's (Derosa Oil Co.'s) No. 1 Saunders, a semiwildcat in the NW Section 40, Block 3, I.&G.N. Survey, Gray County, was drilled to a total depth of 3,075 feet and completed after shooting with 380 quarts from 2,990-3,050 feet. It flowed and agitated 820 bbls. the first 17 hours with 1,000,000 feet of gas. Top of the pay of discovery was encountered at 2,960-71 feet with an increase from 3,020-25 feet. It is now pinched in to 100 bbls. per day.

Oppose Tax on Gas

Operators of the Panhandle district are up in arms over the proposed 1 to 2-cent gas tax which will affect all producers of natural gas in the State of Texas if the bill is introduced in the state legislature and becomes a law. The Panhandle district is probably the largest producer of natural gas in the world and to place such a tax on this commodity will affect the consumer as well as the producer, as reported by men who have made a study of the problem. The operators are obtaining about 3 cents per 1,000 feet of gas at the present and if such a law is passed they claim they will have to stop drilling gas wells and shut in those which are now producing, for they cannot produce for such a little amount as they will obtain for their production. A meeting of operators and friends of the gas and oil industry was held at Amarillo this week to discuss the proposed gas tax, and another meeting is being held today to discuss it further and plan to combat the proposed measure. A special train of independent producers will go to Austin on February 27 to place several petitions before Governor Moody and the state legislature, and one of the petitions is to be aimed at the gas tax which is contemplated by a few in the legislature.

Deep Test in Jack County

In Jack County the Prairie Oil & Gas Co.'s No. 1 Munson, the deep test east of the Buttram Pool, in Section 3, B. S.&F. Survey, flowed 150 bbls. of oil from 4,691-98 feet with 300,000 feet of gas. It is now slowly drilling ahead at 4,720 feet in an effort to pick up an increase in production. Top of the deep sand was first encountered at 4,685 feet and tested 87 bbls. on a one-hour test at a total depth of 4,702 feet, and later flowed 168 bbls. per day at this depth. Gravity of the oil tests 40.5.

Stephens County Wells

The Lone Star Gas Co.'s No. 3 Brooks, located in the southeast part of Section 54, Block 7, T.&P. Survey, in the extreme southwest corner of Stephens County, topped the Caddo lime at 3,350-75 feet and flowed 480 bbls. the first 24 hours before cleaning out. After being cleaned out it made 750 bbls. the first seven hours, with 4,500,000 feet of gas. This well is in an area that has produced little oil, but considerable gas, consequently can be rated as a wildcat oil producer, bringing more favor to this area.

Lone Star Gas Co.'s No. 1 McKelvain and others, located in the same county, which came in with a large amount of gas and oil about three weeks ago, is now shut down at 3,511 feet in the Lake sand which was topped at 3,485 feet. It is gauging 4,000,000 feet of gas and making 2 bbls. of oil and 6 bbls. of water. The Texas Pacific Coal & Oil Co. made a discovery in its No. 1 fee which is located in the SW Section 24, G. M. Allen Survey, on a big block of fee land owned by the company in the northwest corner of Erath County, 1 mile south of Thurber, and 4 miles northwest of the famous X-Ray gas field which is producing from the Bend lime. Top of the gas sand in this new discovery was found at 440 feet, and when it blew in the gas was ignited and burned the rig. It is located on the best surface structure in the county, and has possibilities of opening a splendid pool in this area. As soon as another rig is moved in the well is to be drilled deeper.

Well in Riggs Pool

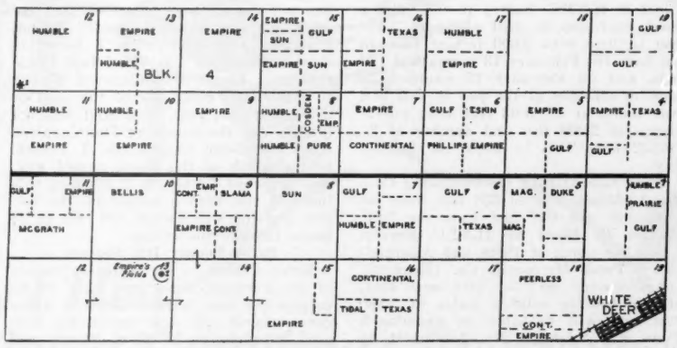
Three miles southeast of the Riggs Pool in Young County, Doctor Riggs has a potential well in his No. 2 Taack at a total depth of 655 feet. The discovery well of this area was brought in two weeks ago in Section 263, T.E.&L. Survey. The discovery topped the oil sand at 670 feet and was completed at 672 feet. The second well is estimated good for around 40 bbls. per day.

Homaokla Oil Co.'s No. 1 Hutchins, located 330 feet from the north and west lines of Section 59, G.H.&H. Survey, Block 1, had 6,000,000 feet of gas with 715 pounds pressure from sandy lime found at 2,840-65 feet. It is located southeast of Jim McCamey's No. 2 Sealy Smith, the discovery well of this small pool located southwest of Valera in Coleman County. There are two producers in the pool to date, and this test promises a third well.

The Overall Pool, Coleman County, produced 938 bbls. from 21 wells on February 18, and the Stewardson Pool, south of Santa Anna in the same county produced 380 bbls. from 13 wells on the same date.

Cornelius Brothers and Taggert are reported as having purchased the E. P. Campbell Oil Corp.'s interest which consists of one-half or less in the following acreage, wells and storage: N half NW, Section 20, east 80 acres of the N half of Section 21, E.T.R.R. Survey, NE SE Section 23, SE NE of same section. In Section 20 there is one producing well with 1,280 bbls. in storage on the lease. In Section 23 there is one producing well with 1,200 bbls. of oil in storage on the lease. Consideration was reported as $115,000.

In Brown County the E. L. Smith Oil Co. started repressuring its George lease in the George Pool, using No. 21 well as the key well, injecting 10,000 feet of gas at 185 pounds pressure. It is reported by field men that the lease had not been benefited to any great extent by the repressuring.



The Empire Oil & Refining Co.'s recent strike west of White Deer, Carson County, in the Texas Panhandle and the acreage nearby.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

Week Ending February 24

CARSON COUNTY

Company, well, farm, name, section and block—	Remarks—
Champlin Ref. Co.'s No. 5 McConnell, 990 ft. S line, 330 ft. W line, N 120 ac. NW, Sec. 67, Blk. 4, I.&G.N. Sur.	Rigged up and S.D.
Danciger O. & R. Co.'s No. 1 Block, 330 ft. N and E lines, Sec. 112, Blk. 4, I.&G.N. Sur.	S.D. 2,985 ft.
Delmar Oil Co.'s No. 5 Noel, 330 ft. S and W, NE cor. W½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	S.G. 3,000-10 ft; S.D. 3,131 ft.
Dixon Creek Oil Co.'s No. 1 Ellis, 330 ft. N and E, NW, Sec. 200, Blk. B-3, H.&G.N.R.R. Sur.	Location.
Empire G. & F. Co.'s No. 2 Deahl, 660 ft. N and E, SW, Sec. 3, Blk. 5, B.&B. Sur.	S.D. 3,035 ft.
Empire G. & F. Co.'s No. 1 Thorp, C NW, Sec. 26, Blk. T, A.B.&M. Sur.	Drlg. 3,375 ft.
Gulf Prod. Co.'s No. 1 Burnett-C, C SE SE, Sec. 35, Blk. 4, I.&G.N.R.R. Sur.	Drlg. 1,160 ft.
H.A.M. Oil Co.'s No. 1 Cooper, 330 ft. S and W, E½ NE, Sec. 5, Blk. 9, H.&G.N.R.R. Sur.	T.D. 3,105 ft; T.P. 3,102 ft; 2,000 ft. oil in hole.
McClintock et als' No. 2 Garner, 330 ft. W and S of E 55 ac., of N 80 ac., NW, Sec. 105, Blk. 4, I.&G. N.R.R. Sur.	Rigging up.
Osborne et als' No. 3 Percival, 330 ft. N and W, SE cor. E½ NE, Sec. 199, Blk. 3, I.&G.N.R.R. Sur.	Building rig.
Pansota Oil Co.'s No. 1 Block, 330 ft. S and W, NE cor. SW, Sec. 111, Blk. 4, I.&G.N.R.R. Sur.	S.D. 3,060 ft.
Prairie O. & G. Co.'s No. 2 Nail, 330 ft. from N and W lines, N½ E½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	10,000,000 ft. gas 2,830-2,985 ft; S.D. 3,123 ft.
Ryan Cons Oil Co.'s No. 7 Block, 330 ft. N, 990 ft. W, SE cor. NE, Sec. 111, Blk. 4, I.&G.N.R.R. Sur.	S.D. 3,062 ft.
Shell Pet. Corp.'s No. 1 Percival, 330 ft. from N and E, SE, Sec. 199, Blk. 3, I.&G.N. Sur.	S.D. 600 ft.
Skelly Oil Co.'s No. 19 Schafer, 330 ft. N, 990 ft. E, SW cor. NE, Sec. 198, Blk. 3, I.&G.N. Sur.	6,000,000 ft. gas 2,895-2,970 ft; S. D. 3,100 ft.
Skelly Oil Co.'s No. 20 Schafer, 330 ft. N, 990 ft. W, SE cor. N½, Sec. 198, Blk. 3, I.&G.N. Sur.	S.D. 3,090 ft.
L. W. Timm's No. 2 Garnet (White Deer), 330 ft. S and W, NE cor., Sec. 104, Blk. 4, I.&G.N.R.R. Sur.	S.D. 1,008 ft.

(Continued on Page 113)

NORTH TEXAS PRODUCTION

Week Ending February 22

Panhandle district—	Production
Carson County	9,870
Hutchinson County	25,300
Gray County	52,700
Moore County	600
Potter County	0
Wheeler County	585
Total production this week	89,055
Total production last week	89,265
Decrease	210
Wichita district—	
Archer County	17,555
Baylor County	375
Clay County	725
Cooke County	5,610
Foard County	230
Jack County	4,160
Haskell County	60
Montague County	5,530
Throckmorton County	715
Wilbarger County	28,550
Young County	8,340
Wichita County	24,580
Total production this week	96,430
Total production last week	97,432
Decrease	1,002
Ranger district—	
Brown County	8,265
Callahan County	3,350
Coleman County	5,055
Comanche County	520
Palo Pinto County	650
Eastland County	5,055
Shackelford County	8,315
Stephens County	5,335
Total production this week	36,545
Total production last week	37,665
Decrease	1,120
Grand total production this week	222,030
Grand total production last week	224,362
Decrease	2,332

TEXAS PANHANDLE COMPLETIONS

Week Ending February 22

Carson County

Dixon Creek Oil Co.'s No. 1 Block was drilled to a total depth of 3,126 feet, was shot with 80 quarts from 3,050-3,126 feet and shot the second time with 120 quarts from 3,000-75 feet and had an initial production of 50 bbls. Herrogan Oil Co.'s No. 1-A McConnell, located 330 feet north and west of W half SW Section 187, Block 3, I.&G.N.R.R. Survey, had an initial production of 175 bbls. at 3,225-90 feet.

Gray County

Shamrock Oil & Gas Co.'s No. 1 Taylor, located 330 feet each way NE cor. NW Section 1, Block 2, I.&G.N.R.R. Survey, was dry and abandoned at 3,308 feet after making 1,000,000 feet of gas at 2,805-10 feet. Derosa Oil Co.'s (formerly Robertson & Devore's) No. 1 Saunders, located in Section 40, Block 3, H.&G.N. R.R. Survey, was shot with 380 quarts at 2,990-3,050 feet, flowed and agitated

(Continued on Page 119)

PROTECTS *against* CORROSION

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For more than a century, pure red lead has been the accepted paint for iron and steel. It is specified by leading engineers. It protects the armor of ships...the skeletons of skyscrapers...the sturdy steel of bridges, oil tanks and other metal structures.

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For high-grade red-lead paint, Dutch Boy Red Lead has long been standard. Pure, fine and highly oxidized, it offers a measure of protection that no other pigment can give.

Dutch Boy Red Lead comes in two forms—paste and liquid. The liquid (ready for the brush) is supplied in six different colors...the natural orange-red, two shades each of green and brown...and black. The paste comes in orange-red, and can be shaded to dark colors.

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LITHARGE of correct physical character and extreme chemical purity is a necessity in oil-refining. Such litharge is made by the makers of Dutch Boy Red Lead and Dutch Boy White Lead. You can always rely on its unvarying uniformity. Our nearest warehouse can give you quick shipment.

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New York, 111 Broadway; Buffalo, 116 Oak Street; Chicago, 900 West 18th Street; Cincinnati, 659 Freeman Avenue; Cleveland, 820 West Superior Avenue; St. Louis, 722 Chestnut Street; San Francisco, 235 Montgomery Street; Boston, National-Boston Lead Co., 800 Albany Street; Pittsburgh, National Lead & Oil Co. of Penna., 316 Fourth Avenue; Philadelphia, John T. Lewis & Bros. Co., Widener Building.

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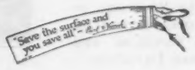

Pipe Line Construction News

STEEL INDUSTRY NOW PRACTICALLY AT NORMAL

By B. E. V. Luty

PITTSBURGH, Pa., Feb. 24.—There has been no really material change in the tubular goods situation in the past 30 days. There was a picking up early in January after a very dull December. Pipe mills have been averaging an operation of about 40 per cent, and substantially the same percentage estimate holds for the seamless tube mills.

For several months there has been no important buying of line pipe, which has been practically out of season, except that a 6,000-ton order has just been taken by the A. O. Smith Corp. in 20-inch pipe for a short Empire line in the Oklahoma City region. A number of important natural gas line projects have been on foot lately, and quite likely to materialize, but no formal inquiries are out. The Texas-to-Chicago line is only one of these, though of course the largest. It is likely to be laid by a combination of the various interests. No definite information is available as to when others will be able to offer large diameter electrically welded pipe, but it looks as if the time would not be long. The first large inquiry for such pipe may force disclosures in this connection.

The steel trade as a whole has maintained approximately the same activity since the first of the month, a very fair rate for the time of year when allowance is made for buyers being particularly conservative and indisposed to anticipate any spring wants. The rate is well below that of last February but only a trifle below the February average in immediately preceding years.

Taken as a whole the steel industry has recovered from such depression as was caused by the stock market collapse of three months ago. Conditions now are practically normal in that respect.

A progressive increase in steel production over the present rate at only a few per cent month by month would carry the rate far beyond any reasonable expectation. Such continuous improvement would be contrary to past seasonal experience for the records are clear that regularly the average steel production during the year is a few per cent below the February rate, which is quite different from continuous gains over the February rate.

Pipe prices are reported steady all along the line, at levels long in force. The rest of the finished steel market has given a good account of itself in the past four weeks, there being no declines of any significance while some lines are perhaps a shade firmer than two or three weeks ago. Previously there had been various declines, although the general average of steel prices was not lowered by more than a couple dollars or so per ton.

Pig iron has been rather dull in the past few weeks but demand is easily heavier than in December. The scrap markets are fully holding their own in prices, although not particularly active. The Chicago market has definitely stiffened in the past week.

MAVERICK SPRINGS LINE

CASPER, Wyo., Feb. 24.— Continental Oil Co. is preparing to start a production test of the company's shut-in wells at Maverick Springs, 18 miles north of Pavillion, Wyo. It is believed that the field will produce about 5,000 bbls. daily. If there is sufficient production, a pipe line may be laid to Shoshone or the Burlington Railroad may extend its line from Bonneville to Pavillion and ship the crude by rail from Pavillion.

NEGOTIATIONS FOR 300-MILE LINE FOR GAS TO MONTANA CITIES

By Tolbert R. Ingram

DENVER, Colo., Feb. 24.—Negotiations are pending which are expected to result in the inauguration of construction work this year of another major natural gas project in the Rocky Mountain area comparable in size and cost with the Amarillo-Denver project completed in 1928 by the Colorado Interstate Gas Co. and affiliated interests and the Colorado-Wyoming-Utah project built in 1929 by the Western Public Service Co. The proposed project will transport natural gas from the Big Horn Basin in Wyoming, and southern Montana, to Butte, Anaconda, Helena and other Montana cities and towns.

The Hope Engineering Co., of Mount Vernon, Ohio, and the Moody-Seagraves interests of Houston, Tex., are active in the negotiations, but no authoritative statement has been made as to whether it will be a joint undertaking, or one or the other of the two interests will build the line. One of the principal incentives to the construction of the line is given as the desire of the Anaconda Copper Mining Co. to secure a supply of natural gas for its smelters in the Butte-Anaconda district. This company has had favorable results in the use of natural gas in its Great Falls plant which is piped from the Kevin-Sunburst Field in northern Montana. Negotiations under way some time ago for the piping of gas from southern Alberta were unsuccessful, it is reported on account of the Canadian government being unwilling to have gas exported out of the Dominion. Natural gas is becoming an important factor in copper smelting operations, the plants at Garfield, Utah, and in the vicinity of El Paso, Tex., having provided supplies of that fuel.

The projected line will be approximately 300 miles long and cost in the neighborhood of $20,000,000. Some difficulties in the negotiations due to other interests owning big gas properties in Wyoming giving careful consideration to a similar undertaking, are being ironed out and it is probable that an agreement will be reached to harmonize these interests into the one project. The Ohio Oil Co., the Midwest Refining Co., the Producers & Refiners Corp., the Kinney-Coastal Oil Co., and several other producers have gas properties which would fit in nicely with the general lineup.

The Moody-Seagraves interests, which operate extensively in Texas and Louisiana through the United Gas Co. some months ago acquired stock control of the Cody Petroleum Co., operating in the Oregon Basin Field in Wyoming, and since then have undertaken considerable exploratory work on several structures.

FINISH ROCK CROSSING LINE

FORT WORTH, Tex., Feb. 24.—The 30-mile electrically welded pipe line from the Rock Crossing Pool in Wilbarger County to Wichita Falls has just been completed and is about ready to run crude oil from the Waggoner Pasture Pools to the independent refineries at Wichita Falls and furnish them with as much crude as desired, although it will take only one-half of the oil now produced from the wells with which it is connected. The Waggoner line is the third in this area, and the last to assume a proration status such as the Texas Pipe Line Co. and the Sinclair Crude Oil Purchasing Co. Half of the oil is to be run and half to go to storage, with a storage fee.

MAY BUILD LINE TO GULF

Mr. Averill of the Beaumont, Tex., office of the Pure Oil Pipe Line Co., is in Chicago conferring with Pure Oil Co. officials in regard to the proposed pipe line from the Van Pool, Van Zandt County, Texas, to the Pure Oil Co.'s refinery at Smith's Bluff, on the Gulf Coast. It is generally believed the company will construct a 10-inch line which will connect with the line extending from the pool to the loading rack at Chandler.

PIPE LAYING IN THE PERSIAN DESERT

MONTANA GAS PROJECTS UNDER CONSIDERATION

A recent survey made in Montana by the Inland Oil Index reports several gas projects in the smaller cities and towns of northern and central Montana. Conrad has had natural gas since October and Choteau since November, 1920. The branch to Varier has been virtually completed. This line runs about 15 miles from the main Shelby-Conrad line, making a total of about 94 miles of line built in that section in 1929.

Construction of the Conrad and Choteau lines was handled by the Pondera Utilities Co. with E. J. Hubbert, consulting engineer, in charge. During 1930 the company plans to pipe gas to Williams and possibly to Bynum, Farmington, Agwam and other towns in that area. It also has a line to the Pondera oil field near Conrad and most of the camps there are using the fuel from the Kevin-Sunburst Field.

One of the projects scheduled for the spring is the piping of gas to Lewistown. While the fields from which the gas will be obtained have not been definitely announced, it is known that engineers in charge expect to get the fuel within 70 miles of Lewistown. It is understood that the surveys and other preliminaries will be completed to permit construction in the spring.

The Bowes structure south of Chinook continues to attract attention and three wells recently completed there are now being tied into lines that feed Chinook and Havre. If a sufficient supply develops in the Bowes structure, a comprehensive development program to include several towns will be undertaken. The three wells that have been completed are of average size. The gas is brought from the field to the cities by the Montana Gas Corp., of which Mr. Hubbert is president.

TO BUILD 20-INCH GAS LINE TO OKLAHOMA CITY

The Cities Service Gas Co., natural gas subsidiary of the Empire Companies, Bartlesville, Okla., has announced the construction of a 20-inch natural gas pipe line from a point 15 miles south of Perry, Okla., into the Oklahoma City Field. This line, 50 miles long, is an extension of the 20-inch line from Dilworth, Okla., to Perry, completed last fall.

In addition to providing an outlet for the enormous natural gas reserves of the Indian Territory Illuminating Oil Co., the line will connect this prolific field with the company's natural gas pipe line system and make an additional supply of natural gas available to all domestic and industrial markets.

This is the first major pipe line to tap what is said to be the largest natural gas reserve in the Mid-Continent Field. The line, which will have a potential capacity of approximately 100,000,000 cubic feet, will be completed early in the summer.

VICKERS SELLS PIPE LINE

WICHITA, Kans., Feb. 24.—The Vickers Petroleum Co. has sold its pipe line connecting the Schurr Pool with a loading rack at Raymond, to the Independent Oil & Gas Co. The Independent has taken charge. This concern plans to build a new loading rack on the Santa Fe Railroad, south of the pool.

Independent is shipping the Schurr Pool oil to its refinery at Kansas City, Kans. The cost is about 30 cents a barrel compared with 39 or 40 cents a barrel for the shorter haul from Raymond to the Vickers refinery at Potwin.

Speeding Up Construction

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Grand Rapids, Mich.

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FULL-CRAWLERS & TRACTOR EQUIPMENT
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OKLAHOMA FIELDS

(Continued from Page 50)

pool has 11 completed wells with a daily average of 3,174 bbls. The production may be extended to the southwest from the present completed wells. Prairie Oil & Gas Co.'s No. 1 Griffin, NE cor. Section 17-6-6, the most southwesterly producer in the pool, was swabbing and flowing 915 bbls. from a total depth of 2,929 feet. Sinclair Oil & Gas Co.'s No. 1 Johnson, in Section 17-6-6, was drilling at 2,895 feet. The Texas Company's No. 1 Harjoche, in Section 17-6-6, was drilling at 2,450 feet. The Hilton-Phillip's No. 1 Hyde, SE cor. NE Section 20-6-6, a wildcat south of the pool, was coring a sand at 3,095-3,113 feet, with a showing of oil. A sand was cored at 3,053-57 feet with a showing of oil. On the north side of the pool Mid-Continent Petroleum Corp.'s No. 1 Talahoke, SE cor. NW Section 6-6-6, cored a sandy shale at 3,039-49 feet, and was drilling deeper. E. L. Harris and others completed the fourth well on their Harjoche lease. No. 4 Harjoche, SW cor. SE SE Section 8-6-6, made 835 bbls. the first 24 hours from a total depth of 2,905 feet. Mid-Continent Petroleum Corp.'s No. 1 Talahoke, SE cor. NW Section 6-6-6, was landing the 8-inch casing at a total depth of 3,223 feet. The test was drilled to a total depth of 3,253 feet with nothing showing.

Amerada Petroleum Corp. and Dixie Oil Co.'s No. 1 Grounds, in SE cor. NE NE, Section 22-9-5, a wildcat south of the old Earlsboro Pool, made 7,365 bbls. on the gauge of February 23, and 8,170 bbls. on the gauge of February 24 at 7 a.m., on the air lift.

A wildcat test near the old Asher Pool found water in the Simpson sand. Payne Drilling Co.'s No. 1 Bullock, SE cor. NE Section 22-6-3, Pottawatomie County, had Simpson at 4,095-4,141 feet, where it was filling up with water.

In the East Little River Pool, Sinclair Oil & Gas Co.'s No. 7 Phillips, SE cor. Section 5-7-7, had water in the Cromwell sand at 3,160-75 feet, and a show of oil. Mid-Continent Petroleum Corp.'s No. 14 Smith, in Section 5-7-7, cored a sand at 3,175-80 feet, with a showing of oil and was landing the 6-inch casing. Same firm's No. 3 Yarhola, SW cor. NE Section 8-7-7, had 2,000,000 feet of gas at 3,251-67 feet, and 475 bbls. of oil.

Magnolia Petroleum Co.'s No. 1 Reed, in Section 31-6-8, a new wildcat east of the town of Sasakwa, swabbed 100 bbls. on the gauge of February 21. The company has staked another location for No. 1 I. Reed, NW cor. SE NE Section 31-6-8, near the discovery well. Same company's No. 1 P. Reed, SW cor. SE SE Section 14-5-7, in the Sasakwa Pool, swabbed 144 bbls. of oil after plugging back to 4,245 feet.

Southwestern Oklahoma

Oil was found in an old gas well southwest of Sayre in Beckham County. The discovery of oil in the Sayre district has renewed interest in the area which has been quiet. Operators have drilled for oil in the area and found only gas. Sayre Oil & Refining Co.'s No. 1 Porch, NW cor. SE, Section 24-9-24w, Beckham County, which was completed as a gas well about a year ago and showing oil at that time was opened and while cleaning out the well started flowing at the estimated rate of 100 bbls. a day. Attempts will be made to complete the well as an oil well and a production test made. The total depth of the well is 2,767 feet.

The oil is the first in the field since a small well was found six years ago in the same district, which is southeast of the gas area. Several of the completed gas wells have had showings of oil.

During the last few months Beckham County has been experiencing a leasing campaign. Some of the major companies blocking and checkerboarding leases. Ramsey Petroleum Corp. has assembled a block of acreage near Delhi, and is having it core drilled. A. J. McLaughlin and others assembled a block of approximately 7,500 acres in Township 10-22w, Beckham County, which is also being core drilled. W. Theimer and others have assembled a block in Township 9-26w, near Texola, of about 5,000 acres, on which a wildcat test may be commenced in the near future.

Good Wells in Palacine

In the Palacine area in Stephens County, Wirt Franklin Petroleum Corp.'s No. 1 Martin, NE cor. NW SW, Section 9-2s-6w, was completed some months ago as a 41,000,000-foot gas well, is now making around 550 bbls. of oil. The gas is exhausting as the oil increases. Dunmar Oil Co.'s No. 1 Randle, SE cor., Section 9-2s-6w, Stephens County, which extended the producing area to the southeast, flowed 282 bbls. of oil on the gauge of February 21. It is a recent completion in the area. Smythe and Ash's No. 1 Johnson, NE cor., Section 20-2s-8w, Stephens County, a wildcat north of the production in the Palacine Pool, was cleaning out and showing for a producer at 2,476-87 feet. The well was cleaning out and a production test was expected to be made in a few days.

Deep-Sand Oil in Caddo County

In the old Cement Field in Caddo County, development of the new deep pay may become active in the next few months, since the 3,500-foot sand was found to carry production. Noble-Olsen Drilling Co., which drilled the discovery well by deepening an old producer, has deepened another old well, its No. 2 Rowe, SW cor. NE, Section 36-6-10w, Caddo County, and it flowed 336 bbls. of oil in 12 hours from the pay at a total depth of 3,397 feet.

Northern and northwestern Oklahoma is expected to be active during the coming months. Wildcat tests may be started in Kay, Grant, Alfalfa and Harper Counties. Empire Oil & Refining Co.'s No. 1 Maple, SW cor. Section 20-27-4, Kay County, was spudding. The wildcat test is 5 miles northwest of Kaw City. This is the first of a number of wildcat tests which may be drilled in the western part of Kay County. Close to the Armour Webb Pool in eastern Grant County some wildcatting is expected. Other tests are expected in the northwest extension to the Tonkawa Pool and in the Alcorn Pool in Kay County.

Magnolia Petroleum Co.'s No. 1 Young, NE cor. NW NW Section 22-21-2w, Noble County, is averaging around 1,000 bbls. a day from sand at 5,100-05 feet. The north offset, No. 1 Sams, SE cor. SW SW Section 15-21-2w, has landed the surface pipe.

Peerless Oil Producing Co. and others' No. 1 Wentz, NW cor. SW Section 22-22-1, Noble County, another wildcat, was plugged back to 3,305 feet and swabbed 95 bbls. The well is to be put to pumping.

Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Section 14-26-24w, a wildcat in Harper County, was drilling at 7,375 feet in black shale. The test is still drilling in rotary hole. Same company's No. 1 Stewart, SE cor. SW Section 33-27-15w, Woods County, fishing at 6,745 feet. Sinclair Oil & Gas Co. and others' No. 1 Crowell, C NW NE Section 23-28-16w, Woods County, was drilling at 4,320 feet. Prairie Oil & Gas Co.'s No. 1 Wilber, NE cor. NW Section 23-23-17w, Woodward County, was drilling at 6,100 feet. Bu-Vi-Bar Petroleum Corp. and others' No. 1 Thompson, was fishing at 6,104 feet. Empire Oil & Refining Co.'s No. 1 Bruce, C NE SW Section 12-25-20w, in the southeastern part of Harper County, was expected to spud in a few days.

Shipments from Oklahoma City

The pipe line and tank car shipments from the Oklahoma City Pool for the week ending February 19 were as follows:

Company—	Bbls.
Empire	170,066
Indian Territory	13,602
Magnolia	52,832
Oklahoma	119,059
Prairie	139,663
Sinclair	6,521
Shell	19,254
Tidal	22,419
Total	543,416
Tank cars	9,800
Grand total	553,216

Greater Seminole Production

Production in the important pools in the Greater Seminole pools decreased approximately 64,000 bbls. on the gauge ending February 19. The Seminole area averaged 178,377 bbls. from 1,850 wells. The daily average gauges from the different pools in the area were as follows:

Pools—	Wells	Bbls.
Little River	360	47,809
East Little River	56	16,944
Carr City	59	8,262
Maud	136	6,050
Misson	110	14,591
Bowlegs	293	21,113
Earlsboro	296	32,772
East Earlsboro	123	31,322
Seminole	273	21,633
East Seminole	31	4,118
Searight	86	8,224
Allen	254	19,877
Asher	26	2,340
Konawa	11	3,074
St. Louis	468	44,354
Sasakwa	45	8,884
Total	2,654	257,006

Pipe Line Shipments

The daily pipe line and tank car shipments for the seven days ending February 19 show an increase of about 2,000 bbls. from the preceding week in the Seminole area. The shipments by companies for the week were as follows:

Company—	Bbls.
Barnsdall	2,252
Champlin	4,709
Continental	1,111
Consolidated	572
Cosden	6,296
Empire	5,437
Gypsy	26,608
Magnolia	11,052
Oklahoma	35,845
Prairie	27,165
Producers & Refiners	1,991
Pure	4,583
Shaffer	5,705
Shell	13,850
Sinclair	30,690
Texas	19,210
Tidal	15,103
White Oak	707
Total	213,142
Tank cars	6,708
Grand total	219,850

Caddo County

Louisiana Oil Refining Corp.'s No. 4 Jones, SW cor. SE, Section 31-6-9w, is rigging up.

Creek County

Gibson & Metz' No. 1-A Hendon, CEL NE NW, Section 31-17-7, is a rig. J. A. Cooney and others made location for No. 1 Bosen, NE cor. SW, Section 10-17-9. Pioneer Petroleum Co.'s No. 1-A Scott, CEL SE NW, Section 15-19-9, made 5 bbls. in sand 2,229-52 feet. Operators Oil Co.'s No. 5 Grayson, NW cor. SE, Section 17-19-9, made 15 bbls. in sand 2,250-66 feet after plugging back from 2,522 feet. A. A. Bailey and others' No. 1 Foster, NW cor. NE, Section 19-19-9, made 1,000,000 feet of gas in sand 2,409-34 feet. Tidal Oil Co.'s No. 12 Tiger, CSL NE, Section 17-17-7, is dry and abandoned at 2,734 feet. Central Commercial Oil Co.'s No. 3 Hay, NW cor., Section 10-17-10, has been abandoned at 3,053 feet. Laurel Oil & Gas Co.'s No. 2 Williams, NW cor. NE SE, Section 21-16-8, is a dry hole at 3,245 feet. Reserve Oil Co.'s No. 1 Davis, SE cor. SW, Section 3-16-10, is dry and abandoned at 2,170 feet. F. B. Murta and others' No. 1-A Smith, SE cor. NE, Section 33-16-10, has been abandoned at 2,222 feet. Sheridan Oil Co.'s No. 1 Skinner, C SW SE, Section 1-16-11, has been completed for 2,500,000 feet of gas in sand 1,850-89 feet.

Jefferson County

O. R. Hart and others' No. 1 Stanfield, C W half NE SE, Section 33-7s-6w, is underreaming 8-inch casing at 825 feet.

Lincoln County

Shell Petroleum Corp. and others' No. 1 Pharris, NE cor. NW, Section 21-13-6, is a dry hole at 4,392 feet.

Okfuskee County

G. B. Suppes and others' No. 1 Severs, NW cor. SW SE, Section 35-11-9, is a machine rigging up. Burke-Greis Oil Co. made location for No. 1 Buck, SW cor. NE, Section 36-11-9. Mid-Continent Petroleum Corp. staked location for No. 5 Dindy "B," C SW NE, Section 31-11-11. Rebold Drilling Co.'s No. 4 Skelton, CEL SW NE, Section 2-13-12, is dry and abandoned at 1,390 feet. Sunray Oil Co. and Shelden's No. 3 Wilson, NW cor. SW, Section 22-12-11, made 120 bbls. in sand 2,710-21 feet. Superior Oil Corp.'s No. 1 Bird, NW cor. SE, Section 23-12-11, has been completed for 2,750,000 feet of gas in sand 2,439-45 feet. Burke-Greis Oil Co.'s No. 2 Unallotted, SW cor. NE SW, Section 36-11-9, is a dry hole at 3,924 feet. Minnehoma Oil Co.'s No. 3 Grayson, NW cor. NE SE, Section 31-11-11, made 15,000,000 feet of gas in sand 3,130-36 feet.

Osage County

Peters Petroleum Corp. and Producers & Refiners Corp.'s No. 3, CEL NE, Section 10-26-8, is a rig moving in. Indian Territory Illuminating Oil Co. is moving tools in for No. 425, NW cor. SW NE, Section 8-24-9. W. D. Gray and others' No. 2, NW cor. NE, Section 3-23-8, is a rig under construction. Mid-Co. Oil Corp. made location for No. 19, SW cor. NE SE, Section 18-22-10. Peter Adamson, Jr., made location for No. 1, SE cor. NW, Section 5-21-9. Zika & Neely staked location for No. 2, NW cor. NE SW, Section 12-21-11. Winona Oil Co.'s No. 10, NW cor. SE NE, Section 20-29-9, has been completed for 55 bbls. in Peru sand 1,512-41 feet. Vacuum Oil Co.'s No. 3, SE cor. NE NE, Section 22-26-6, made 250 bbls. in Burbank sand 2,962-95 feet. Peters Petroleum Corp. and Producers & Refiners Corp.'s No. 2, NE cor. SE NE, Section 10-26-8, has been completed for 47 bbls. in Burgess sand 2,198-2,208 feet.

Pawnee County

J. L. Donahue is erecting the rig for No. 1 Johnson, NW cor. NE NW, Section 27-23-4. Hay and others' No. 5 Copeland, CNL SW SW, Section 26-20-9, is a rig going up. Thompson & Black's No. 1 Bayliss, NE cor., Section 30-20-9, made 112 bbls. in Oswego lime 1,806-08 feet.

Payne County

Pure Oil Co. has the rig on the ground for No. 1 Harris, SW cor. SE SE, Section 4-18-5. Shaffer Oil & Refining Co.'s No. 2 Mathews, SE cor. NE NW, Section 4-18-5, has been completed for 4,250,000 feet of gas in sand 2,736-51 feet after plugging back from 3,610 feet.

Tulsa County

Holmes & Burton's No. 1 Brightman, NW cor. NE NE, Section 30-19-10, is drilling at 300 feet.

Bryan County

W. A. Johnson has a machine at the location for No. 1 Ussery, SE cor., Section 14-6s-7. Slab Oil Co. has a machine on the location for No. 1 Ryle, NW cor. SE SE, Section 27-6s-7. O. P. Bush made location for No. 1 Commercial Trust Co., NE cor., Section 35-6s-9.

Carter County

Trevlyn Oil Co.'s No. 1 Spigner, NW cor. SW NW, Section 24-1s-3w, has been completed for 65 bbls. at 2,714 feet. The Prairie Oil & Gas Co. made location for No. 4 McCartney, SW cor. NW SE, Section 30-1s-3w.

Hughes County

Producers & Refiners Corp.'s No. 1 Proctor, C SE NE, Section 11-7-8, was completed for 12,800,000 feet of gas in sand 2,905-49 feet.

C. W. Clark and others made location for No. 1 Hulley, SW cor. NE, Section 5-9-10, Wetumka Pool. Inglehart and others made location for No. 1 Smith, SE cor. NE NE, Section 28-9-10. Carter Oil Co. moved the rig in for No. 2 Aldridge, SW cor. NE, Section 7-6-8. Pure Oil Co.'s No. 1 Harrod, NW cor. NE NE, Section 7-8-9, is dry and abandoned at 4,825 feet in Wilcox sand.

Love County

Gilcrease Oil Co. made location for No. 1 Burkhart, NE cor. NW, Section 13-8s-1.

Muskogee County

Mack Drilling Co. and others moved a machine in for No. 1 Barnett, SW cor. NW, Section 25-16-15. Babcock Brothers' No. 7 Barnett, C SW NE, Section 8-15-15, is a machine. C. O. Buckles' No. 9 Barnett, NE cor. SE, Section 8-15-15, is drilling at 1,644 feet. H. L. Jolly's No. 2 Carlina, NW cor. NE NW SW, Section 9-15-18, is an old well rigging up to deepen from 1,349 feet. W. E. Lightner and others moved a machine in for No. 4 Beams, SE cor. NW SW, Section 19-14-16. Gillispie & Hale's No. 1 Jennings, SE cor. SW NW, Section 1-13-18, is spudding. L. R. Kershaw's No. 3 Fee, SE cor. NE NW SE, Section

15-13-18, is spudding. Mid-Western Oil & Gas Co.'s No. 3 M. Parker, C NE SW, Section 31-12-19, is spudding. P. Boyle's No. 3 Russell, CSL NE SE, Section 19-15-16, has been completed for 25 bbls. in sand 1,227-42 feet. E. Mills and others' No. 3 B. Kelly, NW cor. NE SW SW, Section 13-13-18, made 750,000 feet of gas from sand 525-43 feet.

Marshall County

Bilbo Oil Trust Co.'s No. 2 Null, SW cor. NE NW, Section 24-5s-5, is drilling at 250 feet. Flemming & Kimbrell's No. 2 Null, SW cor. NE NW, Section 25-5s-5, is drilling at 492 feet. F. W. Merrick's No. 3 Null, NE cor. NW NW NW, Section 24-5s-5, is drilling at 175 feet. Location has been made for No. 5 Null, NW cor. SE NW, Section 24-5s-5. F. W. Merrick's No. 2 Null, SE cor. NW NW, Section 24-5s-5, made 80 bbls. from sands 560 feet to 617 feet. Max Westheimer's No. 2 Davidson, SW cor. NE NW NW, Section 30-5s-6, has been abandoned at 825 feet.

Okmulgee County

Kirkland & Son's No. 10 Bell, SE cor. NE NW, Section 17-15-13, is spudding. J. L. Selby has a machine on the location for No. 3-A Flint, NE cor. SE NW, Section 26-14-14. T. W. McCurry's No. 1-A Stake, SW cor. NE NW, Section 19-13-15, is drilling at 450 feet. Morrison and others' No. 3 Burgess, NW cor. NE NW, Section 20-12-13, is drilling at 450 feet. J. L. Selby's No. 2-A Flint, CSL NE NW, Section 26-14-14, has been abandoned at 1,025 feet.

Pontotoc County

American Oil & Refining Co. made location for No. 6 Robertson, SE cor. SW, Section 19-5-5, Bebee Pool. Superior Oil Corp.'s rig is up for No. 3 Boyd, SW cor. NE NW, Section 32-5-5. Pontotoc Oil Co. staked location for No. 1 Killcrease, NW cor. NE NE, Section 8-5-6. Rush & Vaughn's No. 2 Roper, NW cor. SE NW, Section 32-5-5, Bebee Pool, made 225 bbls. in Viola lime 2,400-2,500 feet. Benedum & Trees Oil Co.'s No. 1 Bumpers, NW cor. NE NW, Section 33-5-5, has been completed for 100 bbls. in Viola lime 2,518-2,660 feet. Ada Development Co.'s No. 7 Lloyd, SW cor. SE NW NE, Section 6-3-7, made a 6-bbl. well in sand 1,193-1,213 feet.

Pittsburg County

Kerr & Kee's No. 1 Tall, C NW NW, Section 32-4-12, has been abandoned at 3,502 feet.

Pottawatomie County

Superior Oil Corp. and others' No. 3 Songster, SW cor. NW NW, Section 8-9-5, Earlsboro Pool, has been completed for 648 bbls. in Wilcox sand 4,310-26 feet. Easton Oil Co.'s No. 1 Townsite, Block 6, Lot 1, NE cor. NW SW NW, Section 8-9-5, Earlsboro Pool, made 650 bbls. from Wilcox sand 4,324-47 feet. Sinclair Oil & Gas Co.'s No. 1 Wilamett, SW cor. NE SE, Section 12-7-4, St. Louis area, swabbed 125 bbls. from Hunton lime 3,742 feet, total depth 3,972 feet in Sylvan shale. Skelly Oil Co.'s No. 3 Decker, SE cor. SW SW, Section 16-7-4, flowed 1,895 bbls. from Simpson sand 4,109-48 feet. Magnolia Petroleum Co.'s No. 1 M. Hilton, NE cor. NW NW, Section 22-7-4, swabbed 74 bbls. from Simpson sand 4,165-68 feet.

Seminole County

Papoose Oil Co. is erecting the rig for No. 2 Marks, NW cor. SE NW, Section 32-10-6, Searight Pool. Gypsy Oil Co. has the rig on the ground for No. 2 Hulbutta, SE cor. SW SW, Section 14-9-5, Earlsboro Pool. Magnolia Petroleum Co. made location for No. 2 Carbitcher, SE cor. NE SW, Section 14-9-5. The rig is on the ground for No. 3 Carbitcher, SW cor. SE SW, Section 14-9-5. Sinclair Oil & Gas Co. has the cellar dug for No. 2 V. Jones, SE cor. SW SE, Section 15-9-5, South Earlsboro Field. Amerada Petroleum Corp. and Dixie Oil Co.'s No. 2 Edwards, NE cor., Section 22-9-5, is a cellar. Magnolia Petroleum Co. has the rig on the ground for No. 2 Ground, NW cor. NE NW, Section 23-9-5. Gwin and others' No. 1 Spense, SE cor. NW, Section 33-9-6, is a cellar. Twin State Oil Co.'s No. 2 Swartz, SE cor. NE SE, Section 10-9-7, is rigging up. Gypsy Oil Co. has the cellar dug for No. 1 Losoche, SE cor. NE SW, Section 33-8-6. W. B. Pine is building the rig for No. 3 Bean, NE cor. SW, Section 13-7-6, Little River Pool. Empire Oil & Refining Co. has the cellar dug for No. 2 Rogers, SE cor. SW NW, Section 9-6-6, Konawa Pool. No. 4 Sachemeche, NE cor. NW SW, Section 9-6-6, is a cellar. Anderson & Curr and Gypsy Oil Co. made location for No. 1 Molly, NW cor. NE NE, Section 30-5-6. Barnsdall Oil Co. made location for No. 3 Lusty, NW cor. SW NE, Section 13-5-7. The Texas Company's rig is up for No. 1 Reed, SE cor. NW NE, Section 23-5-7. Gypsy Oil Co. has the rig up for No. 4 Peters, SW cor. NE NE, Section 23-5-7. The rig is under construction for No. 5 Peters, NE cor. SW NE, Section 23-5-7.

Carter Oil Co.'s No. 3 C. Strothers, NW cor. NE SW, Section 11-9-6, made 785 bbls. from Wilcox sand 4,128-43 feet. No. 2 Powell, SW cor. SE SW, Section 17-9-6, is dry and abandoned at 3,800 feet after plugging back from 4,418 feet. No. 4 Chowning, NE cor. SW SW, Section 19-9-6, East Earlsboro Pool, has been completed for 3,378 bbls. in Wilcox sand 4,120-53 feet. The Texas Company's No. 6 Magruder, NE cor. NW NW, Section 19-9-6, is pumping 35 bbls. from Wilcox sand 4,223-40 feet. No. 8 Magruder, SE cor. SW NW, Section 19-9-6, made 1,025 bbls. from Wilcox sand 4,124-50 feet. Producers & Refiners Corp.'s No. 4 Jefferson, SE cor. NW SE, Section 19-9-6, has been completed for 3,575 bbls. in Wilcox sand 4,187-4,213 feet. Gypsy Oil Co.'s No. 2 C. Coker, NE cor. SW SW, Section 2-8-5, Carr City Pool, has been completed for 605 bbls. in Wilcox sand 4,250-68 feet. Magnolia Petroleum Co.'s No. 1 Jackson, SW cor. SE SE, Section 14-8-7, drilled to 3,333 feet in Cromwell sand, plugged back to 3,205 feet and pumped 45 bbls. The Prairie Oil & Gas Co.'s No. 1 Stanback, SE cor. NW SE, Section 18-8-7, is dry and abandoned at 4,158 feet in Wilcox sand. Magnolia Petroleum Co.'s No. 1 Kiker, SW cor. SE, Section 20-8-7, is dry and abandoned at 4,218 feet in Wilcox sand. Pure Oil Co.'s No. 13 Cotcha, NE cor. NW NE, Section 23-7-6, Little River Pool, has been completed for 110 bbls. in sand 3,139-99 feet. Amerada Petroleum Corp. and Dixie Oil Co.'s No. 1 Billington, NW cor. SW NE, Section 24-7-6, drilled to 4,184 feet in Wilcox sand, plugged back to 4,168 feet and made 125 bbls. Gypsy Oil Co.'s No. 4 Walker, SW cor. SE, Section 5-7-7, East Little River Pool, has been completed for 60,000,000 feet of gas at 3,970 feet. Champlin Oil & Refining Co. and Shell Petroleum Corp.'s No. 1 Sachemeche, NW cor. SW SW, Section 9-6-6, Konawa Pool, flowed 1,847 bbls. from Cromwell sand 2,863-79 feet. Barnsdall Oil Co.'s No. 2 Lusty, NW cor. NE, Section 13-5-7, made 15 bbls. at 2,891 feet after it was plugged back from 2,991 feet. The Texas Company's No. 2 Lewis, SE cor. NW, Section 13-5-7, has been completed for 200 bbls. in Cromwell sand 2,770-89 feet. Mid-Continent Petroleum Corp.'s No. 3 Harjo, NE cor., Section 14-5-7, is dry and abandoned at 3,200 feet. Sunray Oil Co.'s No. 9 Culley, NE cor. SW NE, Section 18-5-8, has been completed for 4,000,000 feet of gas in sand 2,298-2,330 feet.

Stephens County

Pelwin Oil Co. has the rig up for No. 1 Evans, NE cor. SE SE, Section 5-2s-8w. Ellis Drilling Co.'s No. 10 Nigh, NW cor., Section 34-1s-8w, has been abandoned at 2,525 feet. Twin State Oil Co.'s No. 3 Cale, NE cor. SE, Section 14-1s-4w, is a dry hole at 4,314 feet. Pace and Texhoma Oil Co.'s No. 4 Houston, SW cor. NE SW, Section 2-2s-8w, is pumping 30 bbls. from sand 2,169-74 feet. Pace and others' No. 11 McMasters, NW cor. SE NE, Section 13-2s-8w, has been abandoned at 2,156 feet.

Wagoner County

I. V. Horner moved a machine in for No. 3 Ross, SE cor. NE, Section 29-18-18. Mack Drilling Co.'s No. 1 Daniels, C SE NW, Section 25-16-16, is rigging up. E. L. Hunter and others' No. 1 Sier, NE cor. NW NE, Section 10-18-15, is a dry hole at 1,092 feet. Vinita Development Co.'s No. 3 Williams, NE cor. SE SE, Section 35-17-17, has been completed for 750,000 feet of gas in sand 896-914 feet.

Oklahoma County

R. O. Haubelt made location for No. 1 Wyatt, NE cor. NW NW, Section 2-11-3w, Oklahoma City Field. Hall & Briscoe's No. 3 Lindsey, SE cor. SW NW, Section 2-11-3w, is a rig going up. Mid-Kansas Oil & Gas Co. and others' No. 1 Trosper-Browning, SW cor. NW NW, Section 18-11-2w, is a rig under construction. Indian Territory Illuminating Oil Co. and others' No. 2 Mary Unsell, NE cor. SE NE, Section 23-11-3w, is a cellar. Coline Oil Co. has the cellar dug for No. 11 Olds, NW cor. SW NW, Section 24-11-3w. Cromwell & Franklin and others' No. 2 Trosper Park, SW cor. NW SE NW, Section 12-11-3w, made 16,254 bbls. in sand 6,358-6,410 feet. No. 9 Trosper Park, NE cor. SE NW, Section 12-11-3w, drilled to 6,435 feet in lime, plugged back to 6,360 feet and made 11,071 bbls. Jack Shaffer and others' No. 1 Childs, SE cor., Section 14-11-3w, has been completed for 13,209 bbls. at 6,364 feet. Indian Territory Illuminating Oil Co. and others' No. 4 A. Bodine, NE cor. NW SE, Section 24-11-3w, flowed 7,741 bbls. from lime 6,160-6,500 feet. No. 5 A. Bodine, NE cor. SE, Section 24-11-3w, made 19,673 bbls. at 6,525 feet in lime. No. 1 S. Peterson, NE cor. SW, Section 25-11-3w, had sand 6,384-6,495 feet and made 1,367 bbls. Magnolia Petroleum Co.'s No. 1 Noble, NW cor. SW SW, Section 30-12-2w, is dry and abandoned at 7,173 feet.

PRODUCTION IN SEMINOLE AREA

Daily average production of the Seminole area for the week ending February 17:

Company, farm—	S.T.R.	Wells	Prod.
Amerada:			
Nitey	2-7-6	3	285
Amerada-Wilcox:			
Fore	35-8-6	2	467
Barnsdall:			
Cotcha	23-7-6	3	454
Factor	13-7-6	1	69
Hotulka	22-7-6	3	245
Walker	4-7-6	1	3
Blackwell:			
Baker	11-7-6	5	285
Nitey	35-8-6	5	162
Talley	14-7-6	4	530
Thomas	11-7-6	1	Off
Bryan-Emery:			
Carter	4-7-6	1	20
Carter:			
Alec	23-7-6	2	79
Cotcha	23-7-6	3	75
Cudjo	23-7-6	3	100
Factor	36-7-6	1	27
Fish	36-8-6	3	230
Harjo, C.	11-7-6	2	1,411
Harjo, M.	13-7-6	4	181
Jackson	11-7-6	5	1,756
Larney, B.	26-7-6	2	193
Larney, J.	24-7-6	4	800
Lena	10-7-6	1	170
Mopre	11-7-6	2	181
Tewee	14-7-6	6	524
Thomas, M.	11-7-6	1	164
Walker	24-7-6	4	2,690
Wilson	12-7-6	1	88
Champlin:			
Tewee	14-7-6	3	667
Continental:			
Cosar, L.	36-8-6	7	500
Cosar, M.	25-8-6	1	187
Milsey	11-7-6	2	239
Empire:			
Charty	24-7-6	3	471
Coker	13-7-6	4	420
Cotcha	27-7-6	2	7
Sandlin	3-7-6	1	10
Gypsy:			
Brown, C.	33-8-6	1	217
Brown, M.	33-8-6	1	116
Campbell	36-8-6	1	5
Conard	32-7-6	2	95
Cosar, W.	36-8-6	2	114
Cotcha	23-7-6	12	831
Denmark	11-7-6	3	453
Hulhoke	14-7-6	11	1,039
Nungee	1-7-6	1	Off
Potty	36-8-6	4	288
Renton	11-7-6	5	1,289
Willie	24-7-6	2	3,209
Independent:			
Carpenter	27-7-6	2	249
Davis, R.	13-7-6	7	807
Tewee	14-7-6	6	1,165
Harris	23-7-6	13	1,172
Williams	15-7-6	1	316
Independent et al:			
Davis, L.	2-7-6	5	413
Reed	26-7-6	1	Off
I. T. I. O.:			
Campbell	1-7-6	1	161
Dungan	35-8-6	3	197
House, M. A.	1-7-6	1	12
House, W. E.	1-7-6	1	8
House, W. E. "B"	2-7-6	4	263
Hull	26-8-6	2	289
Jackson	1-7-6	3	122
McCulla	1-7-6	2	309
Nitey	2-7-6	5	83
Phoebe "A"	36-8-6	1	15
Phoebe "B"	36-8-6	2	49
Soketeche	1-7-6	3	107
Magnolia:			
Cruse	2-7-6	4	432
Denby	11-7-6	4	120
Harjo "A"	14-7-6	2	25
Harjo "B"	14-7-6	2	Off
Potty	35-8-6	4	28
Reed	22-7-6	3	359
Mid-Continent:			
Bruner	11-7-6	4	86
Eleck	23-7-6	1	11
Wadsworth	36-8-6	4	34
Pine:			
Bean	13-7-6	2	560
Heyecka	26-8-6	7	654
Pine-Phillips:			
Potty	35-8-6	1	23
Prairie:			
Chilcoat	25-8-6	3	283
Coker	1-7-6	2	264
Gibson	14-7-6	5	926
Harris	14-7-6	4	554
House	2-7-6	4	66
Reed	13-7-6	2	714
Talley	14-7-6	6	601
Williams	15-7-6	2	119
Wood	26-7-6	3	74
Prairie-Amerada:			
Sunny	14-7-6	5	833
Prairie-Slick:			
Cudjo	26-7-6	4	342
Producers & Refiners:			
Davis	13-7-6	1	626
Johnson	24-7-6	2	692
Moppin	24-7-6	2	106
Pure:			
Brinson	24-7-6	3	358
Cotcha	23-7-6	12	1,965
Harjo	11-7-6	5	1,435
Hollins	11-7-6	1	256
Reiter-Foster:			
Bunyard	14-7-6	2	371
Ritter	31-7-6	1	Off
Shaffer:			
McCan	33-7-6	1	36
Shell:			
Ceaser	11-7-6	2	756
Glass	26-7-6	1	9
Hotulka	23-7-6	5	605
Johnson	13-7-6	4	445
Sinclair:			
Blanton	11-7-6	1	260
Cosar	36-8-6	3	684
Haney	12-7-6	1	Off
Tewee	14-7-6	2	780
Pompey	24-7-6	1	788
Skelly:			
Carl	14-7-6	2	1,340
Snowden-McSweeny:			
Tiger	13-7-6	2	42
Superior:			
Pulutka	31-8-6	1	3
Texas:			
Brooks	25-8-6	1	7
Coker	1-7-6	3	115
Janey	11-7-6	6	717
Texas-Independent:			
Hotulka, D.	23-7-6	7	806
Hotulka, H.	22-7-6	2	119
Tidal:			
House	1-7-6	1	269
Johnson	1-7-6	1	Off
Twin State:			
Lowe	25-8-6	1	25
Total		360	47,309

East Little River Pool

Amerada:			
Chilcoat	4-7-7	1	268
Continental et al:			
Harrison	4-7-7	5	1,217
Gypsy:			
Payne	5-7-7	6	1,394
Walker	5-7-7	3	864
Magnolia:			
Brame	8-7-7	2	1,601
Reed, E. M.	31-8-7	1	Off
Scipio	4-7-7	1	3
Wolf	20-8-7	1	21
McCulloch et al:			
Harrison	4-7-7	1	Off
Mid-Continent:			
Smith	5-7-7	13	4,055
Yarhola	9-7-7	1	760
Prairie:			
Smith	5-7-7	3	1,061
Prairie-Slick:			
Carr	9-7-7	1	23
Harjo, K.	8-7-7	1	Off
Tiger	8-7-7	2	59
Producers & Refiners:			
Lusty	5-7-7	1	14
Saketke	9-7-7	1	16
Thomas	5-7-7	2	842
Sinclair:			
Phillips	5-7-7	8	3,997
Texas:			
Chilcoat	4-7-7	2	1,249
Total		56	16,944

Carr City Pool

Barnsdall:			
Coker	11-8-5	9	835
Fife	14-8-5	2	85
Barnsdall et al:			
Tulley	10-8-5	1	86
Carter:			
Coker	2-8-5	4	256
Rogers	2-8-5	3	2,290
Empire:			
Cluck	11-8-5	13	1,805
Gypsy:			
Coker, Chippy	2-8-5	1	982
Fife	14-8-5	1	12
I. T. I. O.:			
Tulley	10-8-5	1	6
Magnolia:			
Fee	11-8-5	3	188
Killings	14-8-5	1	5
Prairie:			
Billington	11-8-5	10	1,021
Mitchell	15-8-5	1	60
Sinclair:			
Bean	11-8-5	5	390
Harjo, L.	11-8-5	4	241
Total		59	8,262

(Continued on next Page)

Maud Pool

Company, farm—	S.T.R.	Wells	Prod.
Amerada:			
Ballard	1-8-4	1	43
Fehlig	7-8-5	1	31
Gossland	8-8-5	3	38
Gravel	1-8-4	1	8
Hallum	1-8-4	4	536
Smith	8-8-5	1	258
Amerada-Barnsdall:			
Wallace	17-8-5	4	102
Amerada-Hull:			
Green	20-8-5	3	38
Continental-Shell:			
Everett	18-8-5	2	23
Empire:			
Smith	8-8-5	2	386
Gypsy:			
Bourassa	7-8-5	4	46
Gossland	9-8-5	3	406
Miller	18-8-5	8	200
Independent:			
Harding	18-8-5	4	116
I. T. I. O.:			
State Land	16-8-5	1	51
Laurel O. & G.:			
Billington	18-8-5	3	110
Magnolia:			
Billington	8-8-5	3	52
Green	20-8-5	3	53
Magnolia-Gypsy:			
Smith	20-8-5	1	30
McMan:			
Roberts	9-8-5	1	185
Mid-Continent:			
Shelton	18-8-5	3	20
Phillips:			
Hudson	19-8-5	3	85
Wallace	17-8-5	1	15
Pine:			
Lingerfelt	18-8-5	2	122
Smith	8-8-5	2	175
Prairie:			
Campbell	18-8-5	8	76
Jordan	9-8-5	1	20
Prairie et al:			
Villines	20-8-5	1	3
Pure:			
Lindley	18-8-5	8	66
Urbanskey	19-8-5	2	20
Wiley	8-8-5	4	386
Shell:			
Jordan	9-8-5	4	1,045
Sinclair:			
Bellars	19-8-5	10	295
Calvin	7-8-5	3	85
Lewis	6-8-5	2	30
Smith	9-8-5	1	115
Skelly-Lenox:			
Green	20-8-5	1	96
Skelly-Margay:			
Lingerfelt	18-8-5	4	75
Texas:			
Calvin	7-8-5	9	129
Tidal:			
Dunn	12-8-4	1	17
Everetts	18-8-5	2	25
Smith	8-8-5	1	17
Twin State:			
Colvin	7-8-5	2	54
Wilcox O. & G.:			
Smith	8-8-5	8	367
Total		136	6,050

Mission Pool

Amerada:			
Rice	5-8-6	2	245
Carter:			
Fuswa	18-8-6	3	744
Micco	8-8-6	2	96
Carter-Denver P. & R.:			
Melissa	9-8-6	1	374
Continental:			
Maines	7-8-6	4	539
Darby:			
Judy	1-8-5	1	31
Gypsy:			
Baby	6-8-6	1	15
Barkus, N.	6-8-6	10	1,801
Barkus, S.	7-8-6	1	7
Dosar	7-8-6	5	541
Hardy	7-8-6	5	502
Harjoche	7-8-6	3	5
Micco, I.	8-8-6	2	19
Mission	5-6-8-6	7	801
Mosar	1-8-5	4	206
Independent:			
Lawson	1-8-5	5	396
Independent-Kistler:			
Payne	7-8-6	3	703
McMahon:			
Harjo	7-8-6	2	560
Mid-Continent:			
Ripley	23-8-6	1	80
Minnehoma:			
Neal	7-8-6	4	449
Pine, W. B.:			
Harjo	6-8-6	3	931
Micco	8-8-6	1	25
Prairie:			
Crain	7-8-6	1	16
Melton	6-8-6	3	516
Micco	5-8-6	1	7
Townsend	6-8-6	2	313
Prairie-Gypsy:			
Owens	18-8-6	2	56
Prairie-Slick:			
Nelly	12-8-5	1	88
Shaffer:			
Weaver	12-8-5	3	667
Shell-Continental:			
Hearndon	7-8-6	3	687
Shell-Papoose:			
Maines	7-8-6	8	764
Sinclair:			
Hardy	7-8-6	4	582
Judy	1-8-5	1	23
Tidal:			
Nellie	12-8-5	5	1,091
Twin State:			
Hayes	8-8-6	2	650
Judy	6-8-6	2	25
Ripley	12-8-5	2	36
Total		110	14,591

Bowlegs Pool

Amerada:			
Rascoe	15-8-6	6	339
Atlantic:			
Baker	10-8-6	4	145
Fleet	23-8-6	3	63
Grayson	13-8-6	3	370
Jones "A"	16-8-6	2	11
Barnsdall:			
McNac	28-8-6	1	2
Morrow	11-8-6	4	161
Carter:			
Bowlegs, I.	15-8-6	4	205
Burden	23-8-6	2	139
Harjoche	14-8-6	6	265
Hilly, D.	23-8-6	3	137
Jones	11-8-6	4	301
Walker	16-8-6	4	237
Wise	23-8-6	11	759
Dixie:			
Lizzy	11-8-6	1	5
Empire:			
Lacey	14-8-6	6	148
Wise	23-8-6	2	67
Gypsy:			
Cumsey	10-8-6	4	339
Grayson	13-8-6	4	316
Harjoche	10-8-6	3	249
Jones	11-8-6	1	21
Walker	15-8-6	7	666
Wise	23-8-6	2	111
I. T. I. O.:			
Barnett "A"	24-8-6	1	28
Barnett "H"	23-8-6	1	5
Billington	22-8-6	3	243
Bowlegs	22-8-6	9	692
Davis	13-8-6	4	52
Fay	13-8-6	9	424
Goforth	15-8-6	12	1,070
Livingston	15-8-6	10	855
Lizzie	11-8-6	3	230
Walker	15-8-6	8	873
Williams	12-8-6	1	205
Wilmot	15-8-6	4	289
Work	24-8-6	1	66
Youngblood	24-8-6	1	2
Magnolia:			
Davis, B. F.	13-8-6	3	Off
Davis, M.	13-8-6	1	52
Hammond	10-8-6	8	77
Rhodes	12-8-6	5	256
Vanburskirk	9-8-6	4	163
McCulloch:			
Bowlegs	22-8-6	1	11
Mid-Continent:			
Baker	10-8-6	4	137
Smith	12-8-6	6	376
Minnehoma:			
Bowlegs	13-8-6	1	13
Prairie:			
Gahagan	23-8-6	3	40
Harber	10-8-6	8	760
Jones, G.	11-8-6	3	163
Jones, N.	3-8-6	1	141
Templeton	12-8-6	4	1,129
Whitney	23-8-6	4	198
Pure:			
Reed	14-8-6	14	1,400
Strothers "D"	14-8-6	4	219
Strothers "E"	10-8-6	7	1,046
Shaffer:			
Lacey	14-8-6	3	347
Shell-Houston:			
Taylor	16-8-6	4	Off
Sinclair:			
Cumsey	10-8-6	4	650
Ellen	11-8-6	5	326
Harjo, E.	14-8-6	3	276
Jones	9-8-6	7	143
Taylor, M.	10-8-6	4	448
Taylor, W.	10-8-6	3	377
Walker, I.	22-8-6	4	589
Texas:			
Reed	14-8-6	11	460
Tidal:			
Grayson	13-8-6	4	378
Harjoche	10-8-6	6	848
Total		293	21,113

Earlsboro Pool

Amerada:			
Anderson	15- 9-5	1	152
Cowden	4- 9-5	7	519
Rogers	3- 9-5	2	36
Atlantic:			
Edwards	22- 9-5	1	1,057
Barnsdall:			
Brown	10- 9-5	3	536
Bruner, F.	2- 9-5	2	90
Bruner, N.	10- 9-5	2	129
Cudjo	14- 9-5	1	16
Davis, D.	11- 9-5	3	65
Davis, J.	11- 9-5	4	492
Davis, M.	11- 9-5	2	18
Gibson	9- 9-5	7	394
Hearn	15- 9-5	1	Off
Ingram, J.	1- 9-5	6	172
Pack, S.	10- 9-5	3	27
Peter	10- 9-5	3	32
Sango	1- 9-5	2	360
Sobolka	15- 9-5	1	69
Sullivan	15- 9-5	1	Off
Sull-Harjo	10- 9-5	2	5
Watsutka	12- 9-5	3	254
Burke-Greis:			
Wisener	6- 9-6	2	122
Burke-Greis-Red Bank:			
Mayes	1- 9-5	3	1,029
Carter:			
Cox	31-10-6	1	33
Davis, S.	13- 9-5	3	33
Gilliam	13- 9-5	2	694
James	6- 9-6	3	926
Shepherd	6- 9-6	2	208
Continental:			
Kays	2- 9-5	2	63
Spencer	12- 9-5	4	245
Cosden:			
Anderson	13- 9-5	2	223
Sarber	13- 9-5	1	30
Empire:			
Barker	12- 9-5	1	22
Edmundson	3- 9-5	2	8
Empire-Amerada:			
Bullock, W.	8- 9-5	3	832
Henry	8- 9-5	1	701
Empire-Continental:			
Anderson	13- 9-5	2	60
Empire-Gypsy:			
Keys	6- 9-5	1	22
Gypsy:			
Bruner	10- 9-5	4	855
Carter, B.	11- 9-5	7	1,527
Earl	16- 9-5	1	10
Hunick	5- 9-5	2	1,063
Noble	12- 9-5	3	360
Peter	10- 9-5	1	60
Sango	1- 9-5	9	1,001
State	16- 9-5	2	117
Wisener	1- 9-5	1	14
Eason Oil Co.:			
B.S.&B.	8- 9-5	1	294
White	8- 9-5	1	380
Eason Oil Co.-C. E. Knox:			
Langford	8- 9-5	1	875
E. Haer:			
Haer	31-10-5	1	20
Hubbell-Graham:			
Dobbs	8- 9-5	2	Off
Independent:			
Bruner	10- 9-5	3	103
Sullivan	10- 9-5	1	8
Independent-Darby:			
Knapp	8- 9-5	2	221
Independent-Margay:			
Gaines	11- 9-5	3	54
Magnolia:			
Bryant	9- 9-5	2	13
Cowden	4- 9-5	1	Off
Dixon	12- 9-5	1	11
Edmundson	3- 9-5	1	4
Germany, M.	30- 9-5	1	6
Gilliam	13- 9-5	3	939
Grounds	23- 9-5	1	90
Homsley	11- 9-5	3	7
Hyde	13- 9-5	2	71
Ingram	10- 9-5	1	4
Lena	10- 9-5	3	21
Seay	12- 9-5	9	144
Simpson	10- 9-5	4	155
Sparks	11- 9-5	6	68
Sullivan	12- 9-5	2	176
Mid-Continent:			
McKinley	9- 9-5	3	16
Rogers	5- 9-5	5	694
Mid-Kansas:			
Anderson	14- 9-5	1	20
Phillips:			
Dunaway	14- 9-5	1	17
Reade	8- 9-5	2	592
Prairie:			
Davis	13- 9-5	3	401
Graham, C.	3- 9-5	1	1
Graham, O.	10- 9-5	4	427
Stidham	11- 9-5	9	227
Prairie-Skelly:			
Campbell	6- 9-6	7	2,353
Prairie-Whitney:			
Harjo	24- 9-5	1	Off
Shaffer:			
Clark	1- 9-5	2	138
Shell:			
Bayless	17- 9-5	1	10
Hearn	13- 9-5	1	26
Spencer	12- 9-5	2	304
Sinclair:			
Alexander	36-10-5	1	467
Foreman	18- 9-5	1	12
Sango	2- 9-5	4	308
Sinclair et al:			
Foreman	18- 9-5	1	100
Skelly:			
Mayes	1- 9-5	4	258
Sheppard	6- 9-6	4	1,929
Spencer	12- 9-5	1	146
Skelly-Atlantic:			
Cherry	6- 9-6	4	323
Lottie	6- 9-6	3	158
Skelly-Prairie:			
Varnum	5- 9-6	2	481
Superior:			
Ingram	1- 9-5	2	816
Songster	8- 9-5	3	929
Walker	2- 9-5	2	844
Superior-Shaffer:			
McKay	36-10-5	1	163
Texas:			
Anderson	2- 9-5	8	70
Brown	10- 9-5	8	70
James	6- 9-6	2	168
Rogers	5- 9-5	5	21
Wilmot	10- 9-5	6	60
Tidal:			
Walker	35-10-5	2	658
Watkins	9- 9-5	7	1,025
Twin State:			
Anderson	22- 9-5	1	4
Barker	12- 9-5	2	17
Hearn	2- 9-5	2	42
Magruder	7- 9-5	1	142
Total		296	32,772

East Earlsboro Pool

Amerada-Dixie:			
Fullerton	19-9-6	4	296
Scott	19-9-6	1	230
Sullivan	17-9-6	4	732
Barnsdall:			
Gilliam	13-9-5	1	Off
Noble	18-9-6	5	312
Burke-Greis-Red Bank:			
Fixico	17-9-6	3	885
Carter:			
Campbell	20-9-6	1	68
Chowning	19-9-6	1	605
Harber	7-9-6	3	336
Wrightsman	19-9-6	4	1,980
Continental:			
McGuire	24-9-5	1	878
Gypsy:			
Maley	20-9-6	4	31
Noble, B.	18-9-6	4	1,348
Taylor	19-9-6	1	29
Gypsy-Devonian:			
Payne	18-9-6	12	2,175
Independent-Atlantic:			
Fixico, L.	20-9-6	3	379
Magnolia:			
Anderson, A.	18-9-6	12	2,283
Anderson, D. W.	18-9-6	4	924
Anderson, Panos	18-9-6	3	849
Moore	24-9-5	3	725
Mid-Continent:			
McDaniels	7-9-6	1	49
Minnehoma:			
Noe	17-9-6	5	654
McMan:			
Jones	20-9-6	1	14
Prairie:			
Baker	24-9-5	5	240
Calkins	17-9-6	3	645
Raitman	18-9-6	3	998
Wisner	18-9-6	1	10
Prairie-Slick:			
Wilson	8-9-6	1	63
Producers & Refiners:			
Jefferson	19-9-6	3	1,422
Shell:			
Hopper	19-9-6	8	6,837
Sinclair:			
Miller	24-9-5	1	186
Nichols	19-9-6	8	3,367
Texas:			
Magruder	19-9-6	6	958
Tidal:			
Lasley	19-9-6	2	652
Tidal et al:			
Harjo	20-9-6	1	162
Total		123	31,322

Seminole Pool

Amerada:			
Fixico	23-9-6	2	60
Killings	25-9-6	4	211
Rentie	23-9-6	3	231
Atlantic:			
Cudjo	35-9-6	3	250
Barnsdall:			
Carter	24-9-6	6	103
Henry	14-9-6	2	249
Jones	34-9-6	4	251
Carter:			
Carter, B.	24-9-6	2	28
Carter, F.	23-9-6	3	62
Creamer	34-9-6	1	1
Cudjo, R.	35-9-6	4	77
Cudjo, W.	34-9-6	1	46
Gilliland	27-9-6	1	74
Grisso	23-9-6	4	84
Grisso, M.	15-9-6	1	130
Killing, C. F.	14-9-6	4	31
Killing, M. E.	23-9-6	12	2,641
Knapp	13-9-6	1	30
Lukes	27-9-6	5	596
Pounder	34-9-6	2	108
Simpson	35-9-6	2	85
Strothers	34-9-6	4	277
Vierson	23-9-6	1	11
Carter et al:			
Sanford, C.	16-9-6	1	125
Wisner, C.	16-9-6	1	58
Darby:			
Carter, J.	24-9-6	4	89
Fixico	26-9-6	7	1,168
Harjo, D.	25-9-6	1	32
Harjo, T.	23-9-6	3	34
Empire:			
Gross	25-9-6	1	36
Wilson	34-9-6	2	139
Gypsy:			
Butler	35-9-6	4	120
Carter	24-9-6	8	586
Cudjo, T.	34-9-6	4	573
Fixico	26-9-6	7	71
Harjo	25-9-6	3	45
Wolfe	26-9-6	4	470
Independent:			
Butler	35-9-6	3	272
Fixico, P.	23-9-6	3	331
Harjo	25-9-6	2	12
Independent-Garland:			
Fixico, T.	26-9-6	5	119
Independent-Inter-Ocean:			
Jones	26-9-6	4	270
I. T. I. O.:			
Allen	25-9-6	2	28
Bowlegs	26-9-6	12	1,164
Goodin	23-9-6	3	97
Harjo	23-9-6	3	41
James	24-9-6	2	10
Reed	24-9-6	1	2
Kingwood-Shell:			
Harjo	22-9-6	3	270
Magnolia:			
Boren	2-8-6	1	2
Franks	25-9-6	3	156
Mid-Continent:			
Rentie	14-9-6	9	280
Tayeche	24-9-6	5	214
Phillips:			
Strothers	27-9-6	2	57
Prairie:			
Cudjo, R.	35-9-6	3	288
Franks	35-9-6	6	526
Giblet	35-9-6	3	771
Gross	25-9-6	5	15
Mason	36-9-6	1	19
Spencer	13-9-6	1	6
Strothers	27-9-6	8	736
Tiger	1-8-6	1	23
Pure:			
Strothers	26-9-6	17	2,772
Strothers "B"	36-9-6	4	140
Strothers "C"	34-9-6	1	215
Shell:			
Harber	22-9-6	1	61
Lasley	22-9-6	2	32
Sinclair:			
Carter, J.	13-9-6	2	15
Cudjo "A"	35-9-6	6	377
Cudjo "B"	35-9-6	4	398
Dicey	22-9-6	2	243
Fixico	23-9-6	4	228
Superior:			
Cudjo, B.	35-9-6	4	63
Noble	15-9-6	1	Off
Texas:			
Mayhue	14-9-6	2	420
Strothers	2-8-6	1	27
Turman:			
Cudjo	35-9-6	4	769
Grisso	35-9-6	1	273
Jones	34-9-6	4	709
Total		273	21,633

East Seminole Pool

Barnsdall:			
Keypaya	7-9-7	1	9
Blackwell:			
Jonah	15-9-7	1	120
Continental:			
Boring	17-9-7	1	41

(Continued on Page 118)

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Natural Gas Developments

FILE FINAL REPORT ON ALBERTA WASTAGE

CHATHAM, Ontario, Feb. 22.—The final report of the joint commission appointed last summer by the federal and Alberta governments to investigate the question of gas wastage in Alberta has been submitted to the two governments. The detailed report is not being made public, pending its presentation to the federal parliament and the provincial legislature.

The report describes at some length conditions in the Turner Valley and the production processes followed there. In round figures it is assumed that for each barrel of crude naphtha recovered, there is a wastage of 50,000 feet of gas and 7 gallons of volatile products. Wastage has been increasing steadily during the past five years. At the end of October, 1929, it was at least 200,000,000 feet a day, this being equivalent in heating value to 9,000 tons per day of high-grade Crow's Nest coal. The report concludes with a definition of the problem, and suggestions as to its solution.

Under the first head it says in part:

"It is obvious that in the Turner Valley present operations are rapidly and wastefully dissipating a great natural resource, only about 10 per cent of which is usefully employed. This wastage takes place through the operations, under license, of about 40 producing companies. It is probable the number of producers will be increased shortly, and the wastage will also increase. Only about 30 per cent of the area is operated under government license. The mining rights of about 70 per cent have been obtained from the crown many years ago. These producers are primarily interested in obtaining as great a naphtha recovery in as short a time as possible.

"No voluntary steps of consequence have been taken to curtail wastage or to prolong the lives of the wells. While it may be to the advantage of the individual producer to obtain quick return from his investment, it is decidedly not in the national interest nor is it in the ultimate interest of the producer himself to permit this rapid dissipation without utilization of a great national asset for the immediate benefit of a few."

The commission says the obvious solution is either to reduce production to a point where all products can be utilized or to curtail production by the introduction of conservation methods designed to protect the rights of individual operators to increase the recovery of valuable constituents and to reduce the present wastage. There does not appear to be any present chance, the report states, of operators getting together and agreeing on conservation.

The report adds:

"The only solution which will make conservation possible is recognition of the fact that Turner Valley is a gas field and the formation of rigid regulations for the purpose of controlling all phases of the gas production industry. If existing legislation is not adequate to protect the public interest it should be redrafted to meet the situation.

""These regulations should be administered uniformly by one body representing both federal and provincial parliaments. This is the first and most important step to be taken. Other measures can only be palliative. This action is also a prime essential to the further development of industries based on the presence of this gas supply in Alberta. Without regulation and without control of production, industries cannot be assured of an adequate supply of gas over a period of time long enough to warrant essential capital investments. If adequate regulation is provided a limited industrial development will result."

NAVY'S HELIUM ORDERS

WASHINGTON, D. C., Feb. 22.—Failure of the Navy Department to order from the helium plant operated by the Bureau of Mines, Department of Commerce, at Amarillo, Tex., more than 5,000,000 of the 8,000,000 feet of the gas which it had estimated it would require for the present fiscal year will necessitate keeping the plant in a stand-by condition, at a cost of $9,500 per month, for all but two of the remaining months of the fiscal year, it was stated at the bureau. The plant was closed in December, operated in January, and is closed again.

The cost of operating the plant is only about $3,000 more a month than the cost of keeping it in a stand-by condition, and this difference is so small that the actual net cost to the Government of the 3,000,000 additional feet, which the Navy estimated it would require but did not order from the bureau, would be only about $3 per 1,000 feet.

Since funds are transferred from the Navy Department to the Department of Commerce for operating and maintaining the Amarillo plant, the Navy must bear the stand-by cost, regardless of whether it orders any more helium.

KENTUCKY TAX ON GAS

The Louisville Courier Journal has this to say on the 2-cent tax per 1,000 feet on natural gas produced and sold in Kentucky:

"Governor Sampson's proposal to tax all natural gas produced in Kentucky 2 cents per 1,000 feet would work a severe hardship, not only on consumers in Louisville, Lexington, Paducah and Ashland, but on all the score of gas-using cities and towns in the mountains, the Bluegrass and western Kentucky. The governor's pet hobby has been the Kentucky Progressive Commission, which has for its aim the bringing in of new industries to this State. Almost the first question asked by the owners and managers of plants proposing to locate here, is: 'What's your gas and electricity rate?' A few mills per 1,000 feet of gas is enough to keep away a new factory. The organization, 'Advertising Louisville, Inc.,' which has been campaigning for factories has as one of its chief drawing cards the low natural gas rate. Louisville, while it would pay a large part of this tax, as it pays a large part of every other kind of tax, would not suffer alone. Such a tax would cost the great steel rolling mills in Ashland $100,000 a year since this company uses 5,000,000 feet of gas. The carbon black plants in Taylor County and elsewhere in the gas fields would feel the blow in the increased cost, and they would be obliged to increase the price of their product to the consumer. In the gas-producing fields, the leasers would find their income from the distributing companies cut 2 cents per 1,000 feet. In turn, these leasers, would of necessity reduce the amount they pay to the landowners. The governor's proposal would not only help to throttle Kentucky's industrial expansion, but would deal a blow to the gas industry itself."

CASTOR GAS FRANCHISE

CHATHAM, Ontario, Feb. 22.—The annual meeting of the ratepayers of Castor, Alberta, favored the granting of a natural gas franchise to Young Petroleums, Ltd., of Calgary, and a definite proposition will be submitted for formal approval of the burgesses of the town early in March. The company is planning to drill for oil and gas on the Castor Dome near the town.

NEW MUSKEGON SUPPLY THOUGHT ENDANGERED

MUSKEGON, Mich., Feb. 22.—Natural gas from the Muskegon Field is being used for boiler purposes again since the recent discovery of an additional supply in the lower Traverse sands. As a result it is believed that many wells are being pulled too hard again just as the Dundee wells were last year until they were almost completely exhausted. Representatives of the geological survey division of the Michigan conservation department have recently received some criticism on the ground that operators were selling more than the recognized 33⅓ per cent of the open flow capacity. Many of the new lower Traverse wells have never been gauged but have been hooked to a gas line as quickly as possible.

Rock pressure on the Dundee dry gas wells has dropped to about 10 pounds and there is not more than 1,000,000 feet of dry Dundee gas being obtained from the whole field. There is still some casinghead gas coming from Dundee as well as upper and lower Traverse oil wells. The bulk of the natural gas now being used in Greater Muskegon is coming from the new lower Traverse gas wells, about half a dozen of which have been brought in during the past two months.

The average daily consumption in Greater Muskegon for all purposes is about 7,500,000 feet, or less than half the peak consumption of the past year when as much as 18,000,000 feet was being used daily.

Rock pressure of the new lower Traverse gas wells is estimated at 575 pounds. This will be too rapidly decreased, however, in the opinion of several gas experts in the field if operators do not stop pulling more than one-third of the open flow capacity. There is no immediate prospect of making them stop this practice as there is no accurate information as to open flow capacities of the new wells.

NEW GAS REFRIGERATOR USED IN HOUSE COOLING

An automatic gas refrigerator, said to be of revolutionary design, has been developed at the laboratory of Comstock & Wescott, Inc., at Boston, Mass., according to announcement made by the American Gas Association. J. J. Bodell of Providence, R. I., financed this work, which is understood has been going on quietly for the past six years. Only recently has it been deemed feasible to make public the information of the construction of the first commercial units of this new type refrigerator.

It is learned that the design of this new unit is such that it cannot be included under any previous classification of refrigerators. It employs water as the refrigerating fluid, air for cooling and mercury vapor as the source of energy.

This unit may be placed either in the basement or put into the icebox itself. Gas engineers believed that it may also be of value in connection with the development of house-cooling systems, because it is said that it will be possible to manufacture it conveniently in large sizes.

HAMILTON GAS ACQUIRES LEASES

Hamilton Gas Co. has acquired approximately 22,000 acres of gas and oil leases in Jackson, Mason, Kanawha and Putnam Counties, West Virginia. This acreage is adjacent to about 160,000 acres recently leased by another large company through one of its subsidiaries.

GAS MEASUREMENT COURSE

The seventh gas measurement short course to be held at Norman, Okla., April 15, 16 and 17, will be conducted by the College of Engineering, University of Oklahoma, assisted by the Corporation Commission of Oklahoma and the Oklahoma Utilities Association.

Members of the gas measurement short course general committee are: D. A. Sillers, Lone Star Gas Co., Dallas, Tex., chairman; Earl Rush, Cities Service Gas Co., Bartlesville; W. H. Carson, Oklahoma University, Norman; C. B. Day, Consolidated Gas Utilities Co.; E. F. McKay, Oklahoma Utilities Association; R. H. Lussky, Oklahoma Corporation Commission, all of Oklahoma City; F. D. Frank, Empire Companies, Bartlesville; E. A. Clark and F. C. Walters, Oklahoma Natural Gas Corp.; R. D. Turner, Skelly Oil Co., and A. J. Kerr, Pittsburgh Equitable Meter Co., all of Tulsa; Eugene Metz, American Meter Co., Kansas City, Mo.; B. P. Stockwell, Oklahoma Utilities Co., Bristow; D. C. Williams, Kay County Gas Co., Ponca City; G. P. Bunn, Phillips Petroleum Co., Bartlesville; and S. J. Fraser, Prairie Oil & Gas Co., Independence, Kans.

GAS STORED IN OLD WELLS HELPS OVER PEAK DEMAND

During the past few months the Empire companies have devoted much time and study to the possible use of abandoned gas wells as an underground storage against a future peak demand for natural gas. A group of wells, within a few miles of Eldorado, Kans., was selected for the experiment and during the summer and early fall months of 1929, when industrial and domestic demands were at a low ebb, many millions of cubic feet of natural gas were transferred from the company's system into these wells. Most of the wells were either dead or abandoned prior to this new activity and the reclamation work in connection with the project was only made possible at a considerable cost.

Within a few miles of Eldorado runs the company's 20-inch natural gas pipe line which has its origin in the Panhandle of Texas and its terminus in Kansas City, Mo.

During the past six weeks natural gas, which was stored in these wells, has been used to serve Eldorado for periods of two, six and eight days at a time. There was no interruption of service or any discomforts suffered by local residents due to a heavy pull on the northern terminus of the line. This foresighted policy assured Eldorado an adequate and satisfactory natural gas supply.

MEDAL FOR HEROIC ACTION

The highest award the gas industry can confer in recognition of heroic action is the Meritorious Service Medal, offered each year by the American Gas Association to an employe of a member company for the most meritorious act in saving human life or property. This award consists of a gold medal and button and a certificate. It is highly prized, not only by the recipient but by the company which employs him.

Applications for awards covering deeds performed during 1929 must be filed at A.G.A. headquarters on or before April 15, 1930. The award is available to employes of all manufactured and natural gas company and manufacturer company members of the association. This medal and button, made available through the generosity of Walter R. Addicks, senior vice president of the Consolidated Gas Co. of New York, are beautifully wrought in gold.

HUSKIES!

Hard, tough jobs call for stout and sturdy workers.

The Foxboro Orifice Meter for measuring wet or dry gas is such a worker.

This is a *husky* Instrument and an accurate one.

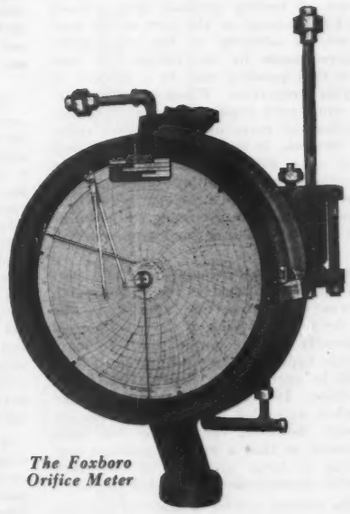
Every part is constructed to give reliable service under the most severe field conditions.

It is without inherent error and measures accurately the slightest variation in flow.

Its check floats positively prevent blowing of mercury.

It is very easy to read, to clean, to take apart, and to zero. It is the most *powerful, accurate* and *dependable* Orifice Meter ever built.

Write to the nearest Branch Office for complete information.



The Foxboro Orifice Meter

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THE COMPASS OF INDUSTRY

Instruments for Controlling, Recording and Indicating Temperature, Flow, Humidity and Pressure

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry. Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

COMPRESSION AND ABSORPTION NATURAL GASOLINE

Is there any foundation to support the statement sometimes heard that compression gasoline is of poorer quality than that made by the absorption process?—H. E.

Some years ago we often heard that "gasoline is gasoline" but with the perfection of testing methods and a more exacting demand on the part of the purchaser, in addition to the remarkable progress made by the refiner, we now know that gasoline may be a product of varying properties. When several refiners work with crude oils of unlike composition and make use of different refining methods, it is not strange that very often some difficulty is experienced in manufacturing a similar product. The same conditions must be considered to a large extent when discussing the gasoline that may be manufactured from natural gas.

In the early development of the natural gasoline industry the compression process was extensively applied to the gas for the extraction of the gasoline and frequently a large quantity of the more volatile hydrocarbons were extracted than could be permanently held in the liquid condition. In other words, the percentage of what we called wild products was excessive; however, the product has been improved so that a natural gasoline containing a large quantity of the very volatile hydrocarbons is seldom found.

The several grades of natural gasoline are made to conform to recognized standard specifications irrespective of the method of extraction, and there can be no great difference in the properties of the gasolines which are properly classified.

A similar question was asked before the Natural Gasoline Convention and was answered by H. B. Bernard: "There is nothing to this at all. The gasoline in a quantity of gas is the same gasoline no matter how it is extracted, by compression, absorption, refrigeration or other means. In fact, I incline to the belief that compression gasoline is a superior product because with it there is little or no trouble with high endpoint and off color."

VACUUM THAT MAY BE OBTAINED

We desire information concerning the highest possible number of points vacuum that can be pulled from a vacuum plant and trust that you can supply us with it?—W. G. B.

Some confusion exists when talking about the degree to which vacuum may be approached. It does not matter whether the measurement is in terms of inches or millimeters, but it is important to fix the meaning. Normal pressure is 760 millimeters, or approximately 30 inches, and any reduction of this is a partial or relative vacuum. A partial vacuum of 8 millimeters should mean an actual pressure of 752 millimeters, but an absolute vacuum of 8 millimeters really means an actual pressure of only 8 millimeters. And to attain this one must reduce or remove the pressure of 752 millimeters.

It is our understanding that pumps are now available which will produce at the intake a pressure equivalent to between 3 and 5 millimeters of mercury. This does not mean that a void of this degree will be delivered to the working unit or surface of the liquid, because the ultimate delivery will depend on many factors; just as we may expect in the delivery of steam and electricity, for example.

FRACTIONATING TOWERS AND EQUILIBRIUM AND CONCENTRATION CURVES

Will you kindly tell me where I can get the necessary information to draw the equilibrium and concentration curves used in the design of fractionating towers? I have Walker, Lewis and McAdams; Robinson, and the article by McCabe and Theil in the chemical journal, but the preliminary information I am unable to find.——M. C. D.

The separation of the products from petroleum or petroleum distillates is effected by fractional distillation and the greatest efficiency results when there are a multitude of fractions each of which has a very small range for any selected property. All petroleum distillates are mixtures of several hydrocarbons, chiefly members of the paraffin series, which could be separated as pure chemical compounds and if this were done each product would boil at a constant temperature. However, this degree of purification is not required to meet commercial demands and such separation would be very expensive. What is necessary is that the refiner keep the fractions within comparatively narrow ranges of boiling points.

The bubble plate tower, the device in extensive use for this fractionation, is a vertical column containing a number of pans or plates. Each plate contains a downcomer or overflow, together with a group of vapor risers which are covered with caps. The condensate collects on each plate and the height of the overflow controls the depth of the liquid on the plate; the lower end dips into the liquid on the plate beneath and thus makes a seal. The ascending vapors are directed through the risers and, by the arrangement of the caps, are made to bubble through the condensate. The vapors enter at the bottom of the tower and there is a gradual cooling of the vapors and liquid toward the top of the tower with the escape of the lighter vapors, and the concentration of the heavier liquid toward the bottom. On each plate the concentration of the liquid reaches a constant, and the percentage of the vapor passing on is fixed, when any given product is being distilled under any given condition. The products and the local conditions must be known.

In addition to the references mentioned, you will find a good outline and many curves illustrating the principles of fractional distillation in Petroleum Technology, by Gurwitch-Moore, page 302. One statement from pages 307 and 308 may be quoted. "The respective diagrams show not only the composition, but also the relative quantities of the two phases at each moment of distillation or boiling. Thus M is the total quantity of the components A and B that are present at a given moment in the still, m the quantity of the liquid, and n the quantity of the vapor phase. P is the composition of the total mixture, that is, of the mixture before it begins to boil and is split into two phases; p is the composition of the liquid, and q that of the vapor phase. From the two equations:

$$M = m + n$$

and

$$MP = mp + nq$$

it therefore follows that $\frac{m}{n} = \frac{q - P}{P - p}$,

that is to say, that the relative quantities of the liquid and vapor phase may be expressed by the fractions aq or pa; the relation of the quantity of vapor to the total quantity of the mixture by $\frac{pa}{pq}$, and the relation of the quantity of the liquid phase to the quantity of the total mixture by $\frac{aq}{pq}$."

DISPOSAL OF CRANKCASE OIL

I have just received from the Bureau of Standards some information concerning a paper by C. E. Kern, "Consider Disposal of Crankcase Oil," in The Oil and Gas Journal, Vol. 27, page 144, November 8, 1928. I would feel obliged to you if you would send me this information.—J. W. M.

Each edition of The Oil and Gas Journal is exhausted soon after publication, so I cannot supply a copy of the Journal in which this contribution appeared. Some of the information contained in this article may be mentioned.

"Used crankcase oil, when refined, meets government specifications, according to a report being issued by the sewer department of the District of Columbia based on analyses resulting from the careful investigation by the United States Bureau of Standards."

"'The results are entirely favorable and show that all the refined oils pass government specifications,' states the Bureau of Standards in referring to the several samples submitted. 'Oils deteriorate in use but when properly refined may be as good as new.'"

Waste crankcase oil has long been a source of trouble in sewers of all cities and there have been explosions in sewers resulting from the gasoline content of this refuse oil, so answers were obtained from a world-wide questionnaire showing conditions in the disposal of this waste oil.

The result of this survey has been the formulation of a plan for the establishment of a plant in Washington to refine waste crankcase oil. The local supply of waste oil was estimated to be 200,000 gallons a year.

Many cities, 70 per cent of those sending replies, prohibit the disposal of waste oil in the sewers. Seven per cent collect this oil. Commercial firms collect the oil to some extent in 55 per cent of the cities.

"The various methods reported for disposing of waste crankcase oil included the following: Pouring on dumps, burning city garbage, fuel oil, oiling concrete forms, paint manufacture, road oil, extermination of mosquitoes, depositing in sewers and reclaiming for reuse."

Several tables are given showing the properties of new oil, used oil and the reclaimed oil. A part of one table is reproduced below:

Test—	Post Office Dept. New	Used	Refined
Saybolt viscosity at 210°			47
Same at 100°	318	133	340
Flashpoint	355		345
Union color number	5		7
Pourpoint, below	20		20
Carbon residue	0.7		0.11
Dilution, per cent.		10	0

An important consideration involved in this problem is the expense of collecting the oil. It is quite generally admitted that adequate treatment must be similar to the conventional refining methods if a lubricating oil of high quality is to be recovered.

ESTIMATED COST OF SKIMMING PLANT OPERATION

Assuming that 300 bbls. of crude worth $2 a barrel are put through a skimming plant daily at a cost of $25 per day for labor and supplies, exclusive of fuel burned and that the products made are: Gasoline, 33 per cent; kerosene, 20; distillate, 10; fuel oil, 27; loss and burned, 10 per cent. How do you figure the cost of each product for inventory purposes?—L. F. A.

When there is no record of the actual cost for the manufacture of each product it is a difficult matter to satisfactorily estimate the expense and each refiner has his own idea about how it should be done, with the result that there are many different schemes in use. An accurate distribution of labor and other expense is almost impossible for such a small plant as one handling 300 bbls. Of course one could distribute the cost on a basis of the percentage yields but a better practice, because it is simpler, is to charge up the total expense to the entire operation and then to carry the inventory at a figure close to the market price.

A plant, as outlined, would have to operate at a loss under the present market conditions if we assume that the returns were the same as those now prevailing in the Mid-Continent district. The prices used are approximate and even cents are used for convenience:

Product—	Yield %	Gal.-bbl.	Sale price per gal.	Return per bbl.
Gasoline	33	13.86	$0.06	$0.8316
Kerosene	20	8.40	.04	.3360
Distillate	10	4.20	.03	.1260
Fuel oil	27	11.34	*.75	.2025
Loss, etc.	10	4.20		
Total return				$1.4961

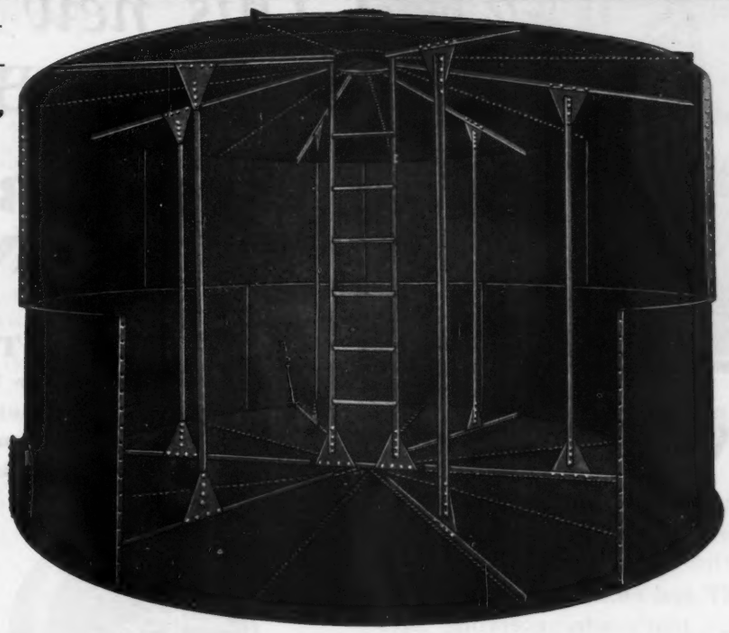
*Per barrel.

	Per bbl.
Cost of crude	$2.00
Loss, etc.	.20
Operation	.08
Total cost	$2.28

This estimate indicates a loss of about 78 cents per barrel of crude handled. Local conditions, which may permit higher market prices for the products, would have to be considered when setting up an inventory or making a more accurate estimate of returns.

"Service on the Dot— Service on the Spot"

The Watch Dog of the Crude!



Top Rafter Angle

Large Size Cleanout Box

Six Angle Iron Tie Rods

Heavy Tie Rod Gussets Bolted to Bottom Angles

Inside Ladder

Thief Hole Pressure Vacuum Valve

Vapor Pressure Dome. Manhole

Flange Type Construction

More Than a Mere Shell!

B.S.&B. Perfection Vapor Pressure TANKS

[Remember the Story of HUMPTY DUMPTY?]

If these tanks were merely built like an egg—shell only—they could never serve their purpose so well, nor have gained the reputation that they have. Each B.S.&B. Perfection Vapor Pressure Tank is rigidly constructed, to maintain a high pressure and protect the tank. Support is furnished from the inside, as well as outside. The shell itself is of flange type construction, which adds to its strength and rigidity, and on the inside, as you can see, there are angle iron tie rods plus a ladder that serves the same purpose, top and bottom angles, heavy tie-rod gussets, etc. It's built like a skyscraper.

But besides the material phase, most important of all is its utility. This tank prevents evaporation loss, and maintains well-head gravity. It *saves* enough crude and volatile gases to pay for itself in short time. "Trifles make 'Perfection'—but 'Perfection' is no trifle."

We also manufacture A.P.I. Tanks. B.S.&B. A.P.I. Bolted Steel Tanks conform to A.P.I. dimensions and the exacting standards of B.S.&B. manufacture. They carry the official A.P.I.

WE also manufacture wood tanks made of redwood or cypress. Eight factories on the job, and all our Fifty Field Stations carry them in stock for immediate erection.

You'll like B.S.&B. Service. From our branch to your lease in a few hours' time, with Fifty Field Stations and stocks in each to serve you. Installations by our own tank crews.

Let us demonstrate the strength, utility and economy of these tanks. We've a man near you now. May he call, or may we send our catalog or literature? Please write Department B-18.

EFFICIENT B S & B SERVICE DEPENDABLE

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Our Watchword S E R V I C E

This new PARKERSBURG

TYPE HB. PITMAN

Boomer Type
Just lift the lever for Quick and Easy Removal from Wrist Pin

Self Aligning Bearing

Adjustable for Wear

Patented

Sizes for all standard wrist pins.
Weight, complete 485 lbs.

Saves time *and fingers*

OFF and on in 39 seconds, easily ... that's why everyone likes this sturdy new Parkersburg Pitman. Its greater convenience saves time and fingers.

That simple boomer lever on the side lifts the Bearing Cap wide open. It makes the job easy and safe. The self-aligning, self-lubricating Bearing of this Pitman will save $99\frac{44}{100}\%$ of your wrist pin troubles.

Don't overlook the construction. The Steel "H" Beam Stem is reinforced on the bearing end—strong enough for any service and, like other Parkersburg Products, it's built to outlast the well.

You will want this new economical Pitman on your next Rig. See the nearest Parkersburg Representative today, or write for prices.

The Parkersburg RIG and REEL Co.

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THE PARKERSBURG RIG AND REEL CO. PARKERSBURG WEST VIRGINIA QUALITY SERVICE MADE IN U.S.A.

TRADE MARK REG.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 54)

Franklin O. & G. Co.'s No. 1 T. J. O'Brien, 300 ft. N, 300 ft. E, SW cor. NW, Sec. 17-15-9 ..... Cmtd. 10-in. 908 ft.

NATCHITOCHES PARISH

S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E, 350 ft. N, C, Sec. 23-5-6 ..... Tested 1,000,000 ft. gas and S.W. 8 ft; S.D. for orders; T.D. 2,536 ft.

Nichols & Wilder's No. 1 Clark, 150 ft. W, 250 ft. N, SE cor., Sec. 10-10-8 ..... Drlg. chalk 2,285 ft.

Robeline O. & G. Co.'s No. 1 Winn, 558 ft. N, 348 ft. E, SW cor. SE, Sec. 7-8-9 ..... S.D. 1,600 ft.

OUACHITA PARISH

J. L. Bullock, trustee's No. 1 West Va. Lbr. Co., N½ NE, Sec. 25-18-5 ..... S.D. on account of high wtr; T.D. 2,700 ft.

RAPIDES PARISH

Ayers Bros.' No. 1 Wickliff, 2,790 ft. N, 150 ft. E, SW cor., Sec. 9-5n-2e ..... S.D. for fuel 2,650 ft.

RED RIVER PARISH

W. D. Ball's No. 1 Krumholtz, 660 ft. S, 660 ft. E, NW cor., Sec. 32-14-10 ..... S.D. account high wtr. 1,550 ft.

LeGrande et als' No. 1 Sample, Sec. 11-14-11 ..... Rigging up.

RICHLAND PARISH

Austin & McDonald's No. 1 Hunt, 594 ft. N, 660 ft. E, SW cor., Sec. 13-17-5 ..... Derrick.

Austin & McDonald's No. 2 Millsaps, SW cor., Sec. 17-17-6 ..... Waiting orders; T.D. 2,679 ft.

Austin & McDonald's No. 3 Millsaps, 1,980 ft. S, 660 ft. E, NW cor., Sec. 16-17-6 ..... Tested S.W; W.O. 2,477 ft.

Austin & McDonald's No. 4 Millsaps, NW cor. Sec. 16-17-6. Location.

Austin & McDonald's No. 5 Millsaps, 2,640 ft. N, 1,320 ft. W, SE cor., Sec. 8-17-6 ..... Derrick.

W. C. Feazel's No. 1 Landrum, 620 ft. N, 4,573 ft. E, SW cor., Sec. 6-16-7 ..... Derrick.

Industrial Gas Co.'s No. 1 T. R. Hodge, 3,259 ft. E, 1,320 ft. S, C, Sec. 7-16-7 ..... Fishing 3-in. drill stem; T.D. 2,874 ft.

Industrial Gas Co.'s No. 1 A. T. Davidson, 1,350 ft. S, 916 ft. E, NW cor., Sec. 6-16-7 ..... S.D; W.O. 2,762 ft.

Industrial Gas Co.'s No. 1 Ruston Drlg. Co., 1,930 ft. S, 1,955 ft. E, NW cor., Sec. 7-16-7 ..... S.D; W.O. 2,636 ft; igneous rock.

Richland O. & G. Co.'s No. 1 Singleterry, 1,930 ft. N, 660 ft. W, SE cor., Sec. 20-18-7 ..... Cmtd. 9-in. csg. 970 ft.

Shreveport Contractors, Inc.'s No. 1 Buie, 600 ft. E, 400 ft. N, SW cor., Sec. 17-15-7 ..... S.D; shale and boulders 2,527 ft.

SABINE PARISH

Bridges-Clark Oil Co.'s No. 1 Gay et al, 300 ft. S, 300 ft. E, NW cor. NE NW, Sec. 3-9-12 ..... Drlg. 2,500 ft.

Bridges-Clark Oil Co.'s No. 1 McWilliams, 330 ft. S, 330 ft. E, NW cor., Sec. 30-10-11 ..... Drlg. 1,800 ft.

G. M. LeGrand's No. 1 A. C. Haley, 1,020 ft. N, 3,300 ft. E, NW cor., Sec. 6-7-12 ..... Tested dry 2,196 ft; drlg. 2,267 ft.

Lohman et als' No. 1 Wyatt Lbr. Co., 150 ft. S, 330 ft. E, NW cor. NE SW, Sec. 18-4-11 ..... Derrick.

Paramount O. & G. Co.'s No. 1 Wootems, 330 ft. N, 330 ft. W, SE cor. NE NW, Sec. 11-6-12 ..... Derrick.

Pelican O. & G. Co.'s No. 1 La. Long Leaf Lbr. Co., 215 ft. N, 30 ft. E, SW cor. NW SE, Sec. 4-7-11 ..... Derrick.

Pelican O. & G. Co.'s No. 1 Sabine Lbr. Co., 330 ft. S, 330 ft. E, NW cor. NE SW, Sec. 1-7-12 ..... Derrick.

D. H. Riddick's No. 1 Scretchfield, 400 ft. E, 400 ft. N, SW cor. NW SE, Sec. 18-9-12 ..... S.D. 2,300 ft.

A. H. Tarver's No. 2 Long Bell, 800 ft. N, 800 ft. W, SE cor. SW, Sec. 18-8-13 ..... Drlg. 2,325 ft

TENSAS PARISH

A. R. Willis et als' No. 1 Curry, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... S.D. 600 ft.

UNION PARISH

Bahan & Bahan's No. 1 J. West, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 33-23-3 ..... D.S. test 2,260 ft; dry; coring.

Interstate Nat. Gas Co.'s No. 26 fee, 2,970 ft. S, 660 ft. E, NW cor., Sec. 33-23-3 ..... Cmtd. 8¼-in. 2,123 ft.

Fred Stovall's No. 1 Stovall, 1,520 ft. E, 350 ft. N, SW cor., Sec. 32-23-4 ..... Rig up.

WEBSTER PARISH

F. M. Fuller's No. 1 Monzingo, 200 ft. N, 200 ft. W, SE cor., Sec. 27-18-8 ..... Began drlg. Nov. 10; cmtd. 10-in. at 62 ft.

Paul C. Warren et als' No. 1 Martin, 305 ft. N, 212 ft. E, SW cor., Sec. 20-20-9 ..... S.G. top Nacatoch 1,759 ft; S.D. 1,912 ft.

WEST CARROLL PARISH

H. L. Hunt, Inc.'s No. 1 R. E. Brown, NW cor. NW SW, Sec. 4-21-11 ..... Began drlg. Feb. 14.

Palmer Corp.'s No. 1-A Marston, 1,320 ft. S, 89 deg. 35 min. W, 1,320 ft. of SE cor., Sec. 11-19-10 ..... Tested S.W. 2,404 ft; drlg. 2,575 ft.

ARKANSAS

ASHLEY COUNTY

Ark. Fuel Oil Co.'s No. 1 Crossett Lbr. Co., 330 ft. E, 330 ft. S, NW cor., Sec. 1-19-7 ..... Drlg. lime 3,312 ft.

CLEBURN COUNTY

Cosden Oil Co. of Ark.'s No. 1 Donophan, 100 ft. S, 660 ft. E, NW cor. SW SE, Sec. 19-9-10 ..... Drlg. shale and shell 1,710 ft.

Donnelly-Craver et als' No. 1 Doniphan Lbr. Co., SE cor. NW, Sec. 33-11-9 ..... Began drlg. Dec. 30; S.D. 60 ft. account cold weather.

COLUMBIA COUNTY

Parker et als' No. 1 Franks, 330 ft. S, 330 ft. W, C, Sec. 25-19-22 ..... S.D. 2,835 ft.

Williams et als' No. 1 Fullenwider, 200 ft. N, 600 ft. E, SW cor. NE SE, Sec. 12-17-22 ..... Rigging up.

DREW COUNTY

McClintock & Goodka's No. 1 Ogles, 920 ft. W, 400 ft. S, NE cor., Sec. 35-13-5 ..... S.D. repairing rig 1,810 ft.

FAULKNER COUNTY

Gold Creek O. & G. Co.'s No. 2 Stermer, SE cor. NW SE, Sec. 17-4-13 ..... Began drlg. Dec. 12.

GARLAND COUNTY

Givens et als' No. 1 Garrett, 660 ft. S, 660 ft. W, C, Sec. 1-3-19 ..... Drlg. gray sandy lime 3,402 ft.

LITTLE RIVER COUNTY

A. L. Buck's No. 1 Greason, NW NW, Sec. 25-12-32 .... S.D. 2,230 ft.

McDonald & Shaw's No. 1 W. E. Black, 240 ft. N, 450 ft. W, SE cor. SE NE, Sec. 12-13-28 ..... S.D. 1,965 ft.

LOGAN COUNTY

M. W. Greeson's No. 1 C. S. Parke, 330 ft. N, 330 ft. W, SE cor., Sec. 21-8-24 ..... Location.

MADISON COUNTY

Phillips Pet. Co. and F. S. Craver's No. 1, C, Sec. 11-14-28. Tested 250,000 ft. gas 63 ft; drlg. 1,461 ft.

OUACHITA COUNTY

Anderson & Wimmer's No. 1 Buck, Sec. 7-15-17 ..... D.S. test 2,680-90 ft; dry; drill stem stuck; T.D. 2,727 ft.

Artex Oil Co.'s No. 1 M. V. Smith, 330 ft. S, 330 ft. E, NW cor. SE NW, Sec. 31-15-17 ..... S.W. 3,077 ft; drlg. 3,166 ft; T.A. 3,188 ft.

Copenhaven et als' No. 1 Warnick, Sec. 2-15-17 ..... T.A. 2,190 ft.

Kobler & Erickson's No. 1 Rumph & Tyson, 300 ft. N, 300 ft. W, SE cor., Sec. 13-15-15 ..... Set 10-in. at 98 ft.

A. P. Smith et als' No. 1 Reynolds, C SW NW, Sec. 21-14-17 ..... Cmtd. 6-in. 1,711 ft; T.D. 1,747 ft.

(Continued on Page 90)

Eight 1,000-Bbl. Maloneys on the B. Johnson No. 3, Oklahoma City. Erected for Cromwell, Franklin and I. T. I. O. Co., by Distributer, Maloney Sales Corp.

MALONEY Vapor-Pressure Construction—

Economic lease storage demands the use of tanks that are, (1) equipped for operation under sufficient pressure to prevent breathing, (2) durable, and (3) strong enough to withstand the necessary pressures.

MALONEY Vapor-Pressure Tanks are equipped with the most improved type of combination vacuum-pressure valves. They are built of 12-gauge sheets of rust-resisting Keystone Copper Steel, amply stayed with 2-inch angle ties.

Because they eliminate both evaporation waste and excessive replacement expense, these tanks insure maximum profits for operators.

"Alone in Quality"

MALONEY TANK MFG. COMPANY
Tulsa, Okla., U. S. A.

Distributers at All Principal Petroleum Points

Maloney A.P.I. Bolted Steel Tanks conform to A.P.I. dimensional standards and carry the official A.P.I. monogram.

MADE OF KEYSTONE AMERICAN COPPER STEEL

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

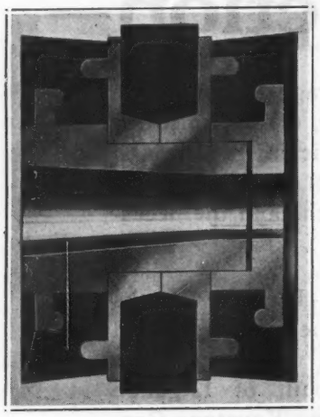
MALONEY
MALONEY

EQUIPMENT AND SUPPLIES

RUBBER PROVIDES NEW TYPE OF PUMP PISTON

A type of slush-pump piston utilizing new compression principles has been introduced by Patterson-Ballagh Corp., Los Angeles, Calif., manufacturer of Bettis protectors. It differs materially from the type originally marketed by the company. It consists of three rubbers, two follower plates and an end plate. The center rubber is called a displacement ring and its operation involves the principle of compression in conjunction with a displacement area.

Contrary to common opinion, the volume of a piece of rubber is not reduced by compression. The elasticity of rubber makes it easily displaceable, however. It is like water in this respect. Utilizing this scientific fact, the center displacement rubber is formed so that its normal periphery is larger than the inside diam-



eter of the liner. V-shaped displacement grooves are molded into this center rubber. When installing the rubber in the slush-pump liner this center ring is subjected to pressure until its periphery is small enough to fit into the liner. The original V-shaped area of the displacement grooves on each side of the ring become less, owing to the bulging of the rubber against their contacting plates. This forces the rubber to maintain a tight fit against the liner and in proportion to the wearing of the center rubber it automatically expands, maintaining its original tightness so that the pressure applied by the pump cannot slip past the rubber. The follower plates and end ring have projecting tongs which hold the end rubbers securely in place. The end rubbers are tapered outwardly toward the end, forming a tight seal when pressure is developed by operation of the piston so that there are three annular wiping contacts at all times during operation. The plates are drop forgings, which give greater strength than the former method of castings, according to the manufacturer.

TANK COMPANY CHANGES HANDS

The Drane-Humphrey Tank Co., serving West Texas and eastern New Mexico with water and oil tanks has been taken over by Dee Donnell, Charles Gibson and Newt Taylor, Mr. Donnell acting as president, Mr. Gibson as vice president in charge of field operations, and Mr. Taylor as secretary-treasurer in charge of the office in San Angelo. S. H. Humphrey, formerly president of the company, is retiring from the tank business to devote his time to other interests, but will remain on the board of directors with Judge C. O. Harris of San Angelo.

NEW COMPRESSOR ADDED BY GARDNER-DENVER CO.

The Gardner-Denver Co., of Quincy, Ill., is offering a new line of duplex two-stage synchronous motor-driven air

compressors to complete its standard line of belt and steam-driven machines. The synchronous motor-driven compressor is of the duplex two-stage heavy-duty type with the motor placed between the two main bearings and mounted directly on the crankshaft. The main shaft is of solid steel forging, oil-treated and annealed which insures maximum strength.

A new feature is the use of roller bearings for the main shaft, reducing the friction to the lowest possible point. This keeps the main shaft, cranks and connecting rods in alignment and increases the life of the entire unit.

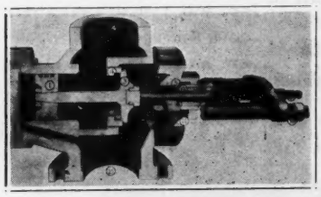
BUYS PLANT IN BIRMINGHAM

The Chicago Bridge & Iron Works, manufacturer of steel tanks and steel plate work, has purchased the Reeves Brothers Co. plant in Birmingham, Ala. The plant, located on a 40-acre tract, which was included in the purchase, has a capacity of 4,000 tons per month. It will be used by the Chicago Bridge & Iron Works to fabricate steel for erection at southern points, for shipment to the Pacific Coast by water and as additional facilities for handling export work.

SAME PRESSURE EXERTED IN OPPOSITE DIRECTIONS

A balancing piston rigidly attached to the valve stem causes equal steam pressure to be exerted in opposite directions in the Two-in-One balanced throttle and relief valve announced by the Crausbay Supply Co., Inc., Beaumont, Tex. According to the manufacturer this valve operates easily and accurately under any amount of steam pressure, the valve disc will not jam or stick to the valve seat and there is no wear or strain on the operating screw or the screw bearing.

The steam pressure in the manifold and steam-chest can be relieved at the will of the operator, allowing the clutch to be released without reversing the engine, saving jerking and breaking of chains and excessive wear on the engine bear-

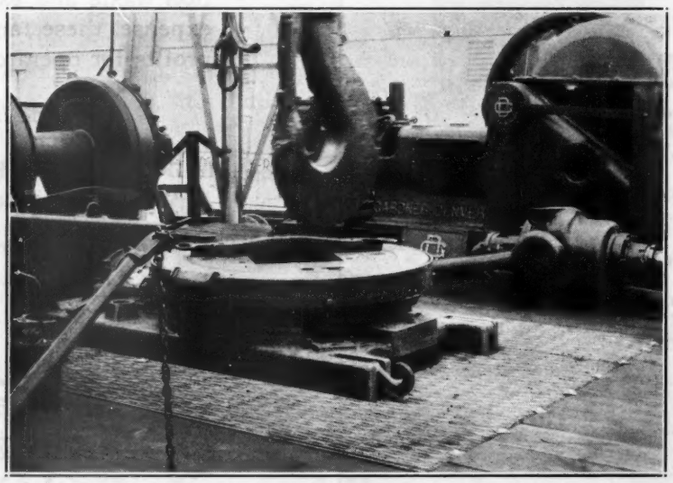


ings and drawworks. The driller is enabled to stop and start the engine several times during one revolution of the crankshaft. The engine can be stopped and the back pressure released instantly.

The valve, manufactured for Crausbay by the Ajax Iron Works, is distributed by the National Supply Companies.

Bullard-Davis, Inc., manufacturers and distributors of safety equipment, has been appointed by the Standard Oil Co. of California licensed manufacturer of the Standard Oil patented aluminum first-aid kit, which will be marketed as the Bullard cylindrical first-aid kit.

GRATING DECREASES PERILS OF THE DERRICK FLOOR



Hazards of the derrick floor in rotary drilling operations are reduced by a grating made by the Emsco Derrick & Equipment Co., Los Angeles, Calif. If a solid wood floor is laid around the turntable slush released from the drill-pipes in pulling out of the hole forms a pool which makes slippery footing for workmen who must use this particular spot.

The grating permits mud and slush to drain away quickly, leaving a sure footing. If it is desired to keep the slush from draining into the cellar under the derrick floor a drip-pan can be built under the grating, conducting the slush to the pit through mud-troughs.

The grating is made in sections so that it can be reclaimed after the drilling work is finished, and the opening can be covered with the regular floor boards.

HIGHER POST IS GIVEN TO RALPH LEAVENWORTH

In connection with the expansion program of the Austin Co., designers and builders, Cleveland, Ohio, George A. Bryant, Jr., executive vice president and general sales manager, announces the ap-

Ralph Leavenworth

pointment of Ralph Leavenworth as assistant general sales manager. Mr. Leavenworth formerly was account executive.

The Austin Co. is inaugurating noiseless industrial and commercial building with the electric welding of structural steel as a regular part of its service.

The Gilmore Oil Co., Ltd., Los Angeles, Calif., has awarded a contract to the Austin Co. for the construction of a branch distributing station in Portland, Ore. The new station, consisting of two units, is to cost approximately $40,000.

SALES MANAGEMENT OF YALE & TOWNE CHANGED

E. C. Waldvogel, vice president in charge of sales of the Yale & Towne Manufacturing Co., Stamford, Conn., manufacturer of Yale locks and builders' hardware and Yale materials-handling equipment, will retire from active participation in the company's business on April 1, to give more time to personal affairs. Mr. Waldvogel has been connnected with the company 25 years. He will continue in an advisory capacity and will hold the office of vice president and remain a director.

Walter B. Dodge, who has been assistant to the vice president in charge of sales has been appointed manager of all Stamford hardware sales. Mr. Dodge joined the company as a young man 24 years ago. James C. Morgan takes complete charge of all materials-handling equipment sales, including Yale chain blocks, electric hoists and electric industrial trucks, as well as Stuebing hand lift trucks and skid platforms. Mr. Morgan went to the company from the C. W. Hunt Co. some 10 years ago.

At the annual meeting of the Harshaw Chemical Co., Cleveland, Ohio, William B. Lawson was elected a director and at the organization meeting of the board he was elected a vice president. For many years Mr. Lawson has been connected with the International Nickel Co.

The new H. C. Smith Type "G" Demountable Drilling Bit—may be run with the side reamer bit body, or with plain body without side reamer rollers.

The H. C. Smith Type "C" Coring Outfit

Our aim, always, is to supply the proper tools for each particular purpose — the tool that will render the most efficient service—tools that actually cost the least — price, durability, performance and general satisfaction all considered. That is why H. C. Smith Quality Tools are constantly establishing new records for speed and economy. That is why experienced operators throughout the oil world unhesitatingly select H. C. Smith Tools to meet all the various operating conditions encountered in drilling, underreaming and coring. If you are not familiar with H. C. Smith Tools, get posted now—write for descriptive folders and records of performance

Los Angeles
March 16-23,
1930

Booths 74 and 105

H. C. SMITH MANUFACTURING CO., INC.
Los Nietos, California
Branch Offices and Warehouses:
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Quality DRILLING, CORING *and* UNDERREAMING TOOLS

AGITATION FOR NATIONALIZATION OF OIL RENEWED IN ARGENTINA

By John H. Nelson

Agitation for the nationalization of Argentina's petroleum resources current for the past several years has been renewed with unusual vigor and is fast becoming an integral part of national political activities.

The Argentine Congress Senate Commission investigating this subject invited the president to supply a formidable list of data regarding the sale and refining of oil, and also as to the Y.P.F. (the state petroleum organization) as the latest move in this affair.

It further requested the senate to increase its powers in order to investigate denunciations against members of that body on account of their alleged relations with petroleum companies, certain articles in the newspaper La Epoca being specified, and also to investigate the Y.P.F. whose methods of bookkeeping have been seriously questioned from time to time. The authority requested of the senate was readily granted by that body.

The president retorted to this move in the form of another message to the senate which was published in the government press. This message which is really the third he has recently sent on the subject, again urges the approval of the projects passed by the deputies two years ago.

President's Position

The president claimed that petroleum legislation affects fundamental interests, business as well as judicial, and that it cannot be indefinitely postponed. He further made the point that during the two years which have elapsed it was impossible that the senate should not have had time to get to the bottom of the matter. The passage of the measure would spare this country the disturbances which oil has created for other nations and would reserve for the exclusive advantage of the people of the Argentine Republic the wealth which lies in its soil. The president also declared the matter to be of peremptory urgency.

There has been, of course, considerable local editorial comment pro and con. The government papers claim that the action of the Y.P.F. in reducing gasoline 20 centavos per liter has compelled foreign enterprises to follow suit. The Argentine's demand is for 750,000,000 liters a year and 4 cents on this represents a national saving of 30,000,000 pesos, of which one-third is represented by the national production. As a result 22,000,000 pesos have been stopped from going abroad.

La Epoca, a local newspaper, in a bitter editorial entitled, "With Oil Imperialism," rebukes the senate for wishing to investigate the petroleum question and insinuates that La Nacion and La Prensa have been bought by foreign oil interests.

Press Comment

La Prensa, in an editorial entitled "Demagogues and Petroleum," declares that the petroleum question has been used for electoral purposes for a long time and that the reduction of the price of government gasoline is evidence of a determined political tendency. According to the publications by the Ministry of Hacienda, in the first nine months of 1929 oil imports will have attained the sum of 250,000,000 pesos m/n, which means that the government exploitation is every day becoming less able to satisfy national consumption. From authoritative sources it is learned that the real reason for the price reduction on the part of the government was its inability to get rid of stocks of finished products on hand because of the defective selling organization of the Y.P.F.

La Razon observed that the president's message to the senate confirms the general opinion that it is the desire of the executive to have an absolute monopoly of exploration and exploitation of petroleum deposits as also of the industrialization of the oil taken therefrom. This paper, La Razon, considers that there should be nationalization but that it should be brought about in another form and without creating opposition in the provinces by taking away provincial property. It also considers that the discussions of 1927 were too violent for the formation of a sound opinion on the question. Moreover, the arguments advanced were not convincing and proved nothing. While the paper agrees that it is time to end uncertainty, it considers the president's message asking for approval without modification to be asking for a good deal.

By reason of the absence in Mendoza of Senators Bravo, Echevehere and Serrey, the special Senate Petroleum Commission has become disintegrated, but the minority of the commission has been authorized to continue taking evidence.

Some idea of the radical nature of some of the views expressed on this question may be had by reference to a speech of General Baldrich in the provinces in which he scoffs at the idea of the payment of 1,200,000,000 pesos for indemnities for expropriation. He claims that the monopoly of transportation would oblige foreign companies to abandon the country without paying anything at all.

From the above it will be seen that almost anything can be expected from this Argentine situation but apparently a decision in one direction or another may be expected shortly.

BILL TO AUTHORIZE RIGHT OF WAY LEASES

WASHINGTON, D. C., Feb. 22.—The House of Representatives has passed a bill authorizing the Secretary of the Interior to lease deposits of oil and gas embraced in railroad and other rights of way to the right of way owner at such royalty, not less than 12½ per cent, as may be fixed by the Secretary.

The Secretary is further authorized to permit the assignment of such leases so the right of way lessees may agree with the owners of the adjoining lands for cooperative production. This legislation has been urged because the United States has no dispensable interest in the surface of lands across which such easements and rights of way have been acquired under the public land laws so that unless such legislation is enacted the oil and gas can be drained from easements and rights of way without power of the government to exercise control or to receive remuneration.

The owner of the easement or right of way has no claim to the oil and gas, and by reason of the narrowness of the easement and right of way the underlying oil and gas cannot be disposed of or operated in terms of normal subdivision or units with other lands. If the drilling of an excessive number of offset wells is to be avoided, the Secretary of the Interior ought to have the discriminatory power conferred upon him which this bill provides, according to the sponsors.

DRILLING IN AUSTRALIA

The Victorian (Australia) Mines Department reports that at the oil bore at Metung on the Gippsland Lakes the drill encountered glauconite at a depth of about 1,400 feet. The bore was inspected by the secretary of the mines department as oil had been obtained in small quantities from the glauconite at Lakes Entrance, several miles further to the east. At a depth of 1,430 feet oil appeared on water which was running from the bore at the rate of 200 gallons an hour. Geological features indicate that oil may occur in this district over a very wide area, but until the contour of the subsurface strata has been mapped by extensive drilling, it will be impossible to determine the most favorable spots.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 87)

PIKE COUNTY

Theo. Davis, trustee's No. 1 Ruth Wilson, 200 ft. S, 200 ft. W, NE cor., Sec. 25-5-26 ..... S.D; funds; T.D. 713 ft.

POPE COUNTY

Ark.-La. Pipe Line Co.'s No. 1 Harms, 622 ft. S, 628 ft. W, NE cor. NE NW, Sec. 22-9-21 ..... Drlg. 1,825 ft.
Ark.-La. Pipe Line Co.'s No. 1 Crutcher, 330 ft. S, 450 ft. E, NW cor. NE NW, Sec. 14-9-21 ..... Location.
Cosden Oil Co.'s No. 1 Mo. Pac. R.R., 660 ft. N, 660 ft. E, SW cor. NW SE, Sec. 13-9-19 ..... Arranging to cmt. 12½-in. 2,500 ft.

PRAIRIE COUNTY

Transcontinental Oil Co.'s No. 1 Louis Novak, 330 ft. E, 330 ft. N, SW cor. SW NE, Sec. 36-2n-6 ..... Drlg. hard rock 2,898 ft.

ST. FRANCIS COUNTY

Brownlee Drlg. Co.'s No. 1 Whitted, 110 ft. N, 110 ft. E, SW cor. SE NW, Sec. 28-4-1 ..... S.D; funds; 300 ft.

UNION COUNTY

Al-Cal Oil Corp.'s No. 1 Harvey, 660 ft. W, 300 ft. S, NE cor. SW SE, Sec. 1-17-16 ..... S.D; W.O. 2,234 ft.
Bredham et als' No. 1 Craig, SW cor. NW NE, Sec. 6-18-15 ..... Running sand pump; T.D. 2,200 ft.
W. M. Coates, trustee's No. 1 McDuffie, Sec. 32-19-17 .... T.A. in red beds; T.D. 4,506 ft.
O. W. Estes' No. 1 Felsenthal, 330 ft. S, 330 ft. W, NE cor. NE NW, Sec. 2-18-15 ..... Pulled liner; S.D; W.O. 2,230 ft.
O. W. Estes' No. 1 Telford, 320 ft. S, 320 ft. E, NW cor. SW, Sec. 35-17-14 ..... Swbng; 1,800 ft. S.W. in hole; arranging to deepen; T.D. 2,230 ft.
Federal Pet. Co. and Union Saw Mill Co.'s No. 1 fee, 330 ft. N, 330 ft. W, SE cor. NW NE, Sec. 9-18-13 .. Derrick.
Lion Oil Ref. Co.'s No. 1 Ballard, 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 10-18-13 ..... Began drlg. Feb. 12; cmtd. 12½-in. 287 ft; drlg. 350 ft.
Marine Oil Co.'s No. 1 Simmons, 200 ft. N, 200 ft. W, SE cor. SE NW, Sec. 10-18-13 ..... Rigging up.
Marine Oil Co.'s No. 2 Simmons, 300 ft. N, 300 ft. E, SW cor. SE NW, Sec. 10-18-13 ..... Location.
Marine Oil Co.'s No. 2-B Winn, 200 ft. S, 200 ft. E, NW cor. NW SE, Sec. 10-18-13 ..... Location.
Modisette et als' No. 1 Union Sawmill Co., 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 14-18-14 ..... Rig up.
Johnson-Gummer Co.'s No. 1 Cargile, Sec. 4-18-15 ..... O.W.D.D; arranging to deepen; T.D. 3,341 ft; dry and abd. Oct. 2, 1929.
Stark et als' No. 1 Ainsworth, NE cor. NW NE NE, Sec. 8-19-16 ..... S.D. 2,405 ft.

VAN BUREN COUNTY

Glenn Cole et al, trustee's No. 1 Scanlan, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 5-19-13 ..... S.D. 50 ft.

WASHINGTON COUNTY

Delbert & Graves' No. 1 Cunningham, Sec. 14-15-32 .... S.D. repairing pump; T.D. 550 ft.
O'Hara & Shetterly's No. 1 Boyd, SE cor. SE NE, Sec. 12-16-32 ..... Spudded Sept., 1928; S.D. 140 ft; resumed drlg. Aug. 25; U.R.; T.D. 150 ft.
C. H. Willoughby's No. 1 Jones, Sec. 34-16-30 ..... Trying to kill wtr. flow 2,150 ft; hard sand showing oil 1,637-40 ft.
Lincoln Leaseholding Synd.'s No. 1 Lincoln, Sec. 30-15-32 ..... U.R. 8-in. to T.D. 1,500 ft.

WHITE COUNTY

Letona Synd.'s No. 1 Letona, SE cor. NW SW, Sec. 35-9-8. Cmtd. 5 3-16-in. 3,500 ft; drlg. 3,605 ft.

EAST TEXAS

CAMP COUNTY

Rogers et als' No. 1 Enfelt, R. M. Montgomery Sur. .... Tested dry 1,870 ft; S.D. 1,920 ft.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossier, E. Hughhart Sur. .... Drlg. 2,050 ft.
Shad Harper's No. 1 W. R. Garland, J. Wagley Sur. .... S.D. 1,862 ft.
Johnson Pet. Co.'s No. 2 Randolph, Edward Dean Sur. .. S.D. 2,000 ft.

SHELBY COUNTY

Benedum & Trees Oil Co.'s No. 1 McCann, D. G. Green Sur. ..... Drlg. 2,045 ft.
Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur. .... S.D. for orders 3,004 ft.

MISSISSIPPI

ALCORN COUNTY

Alcorn Pet. Co.'s No. 1 Matthews, SE cor. Sec. 14-2s-7e.. Arranging to shoot 2,520-60 ft; T. D. 2,735 ft.

CHICKASAW COUNTY

Hightower & Golson's No. 1 Flemming, NE cor. Sec. 20-13-3 ..... Driving 8¼-in. through quicksand; T.D. 1,280 ft.

HINDS COUNTY

Oscar Brown's No. 1 Riverside (formerly Hennessee et als') SE cor. SE SW, Sec. 23-16-5 ..... Set 12½-in. 30 ft; S.D. 1,050 ft
Jackson O. & G. Co.'s No. 1 Mayes, Sec. 2-5-1e ..... Estimated 2,000,000 ft. gas, 2,000 bbls. wtr; S.D; T.D. 2,480 ft.
Mrs. Reeder et als' No. 1 State, SE cor. NW NW, Sec. 25-6-1e ..... W.O; T.D. 2,905 ft.

HUMPHREYS COUNTY

E. C. Steele et als' No. 1 C. B. Box, SE cor. SE NE, Sec. 25-14-4w ..... Set 12½-in. 60 ft; S.D.

LAUDERDALE COUNTY

Lauderdale O. & G. Co.'s No. 1 Lackey, 990 ft. S and E, NW cor. NE, Sec. 2-7-16 ..... Set 8¼-in. 2,792 ft; T.D. 2,816 ft; sand 2,809-14 ft; W.O.
Meridian O. & G. Co.'s No. 1 Hauser, Sec. 33-8-15 ..... S.D; green sand 2,698 ft.
J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-6-14 ..... Derrick.

LAFAYETTE COUNTY

Banks-Goode et als' No. 1 May, 113½ rods S, 26 rods E, NW cor. SW, Sec. 22-10-1w ..... Derrick.

LINCOLN COUNTY

Lincoln O. & G. Co.'s No. 1 Pat Case, NE NE, Sec. 21-8-6. S.D; W.O. 2,221 ft.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19 ..... S.D. 2,912 ft; bailer lost in hole.
Amory Pet. Co.'s No. 1 Hall, Sec. 8-13-19 ..... Bailing to test oil and gas show; T.D. 2,387 ft.
Park Bowser et als' No. 1 Cowart, second hole, Sec. 2-12-19 ..... S.D. 30 ft.

RANKIN COUNTY

Gulf Ref. Co.'s No. 1 Rainey, NW NW, Sec. 13-5-1e .... Rigging up.

WARREN COUNTY

El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-15 ..... Waiting for 6-in. to set; over 3,350 ft. stuck; D.S.; T.D. 2,475 ft.

YALOBUSHA COUNTY

Carter Oil Co. and J. D. Collett's No. 1 Blackmur, 330 ft. S, 990 ft. W, C, Sec. 14-11-4 ..... Fishing drill stem; T.D. 2,433 ft.

YAZOO COUNTY

Amerada Pet. Corp.'s No. 1 Doherty, SW SW, Sec. 24-12-2 ..... Drlg. 3,900 ft.

ALABAMA

LAMAR COUNTY

Briggs & Knapp's No. 1 Wefel, Sec. 25-12-14 ..... Drlg. hard lime 1,730 ft.

LAUDERDALE COUNTY

A. D. Morton et als' No. 10 O'Neal estate, Sec. 8-2s-13w.. Rigging up cable tools.

MARION COUNTY

Hobson et als' No. 1 John Clark, SE, Sec. 29-11-14 .... Derrick pattern.

WASHINGTON COUNTY

S. A. Hobson's No. 1 Hobson Bros., Sec. 9-8-2 ..... S.D; S.W. flow at 1,450 ft.
S. A. Hobson's No. 1 Wilson, Sec. 27-7-1 ..... Fishing bailer; T D. 881 ft.

HILL & FOSTER AUTOMATIC CATHEAD

TYPE K

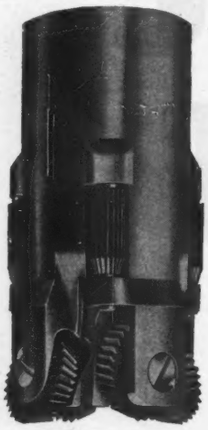
Descriptive Bulletin No. 15 Sent on Request

THE NATIONAL SUPPLY COMPANIES

EQUIPMENT AND SUPPLIES

H. C. SMITH ANNOUNCES TYPE F ROCK CORE BIT

The latest addition to the line of drilling, underreaming and coring tools made by the H. C. Smith Manufacturing Co., Los Nietos, Calif., is the type "F" rock core bit which, the company says, cores



the hardest formations, including schist quartz and chert, and operates on a new principle that increases efficiency.

This new bit has more cutting surface. The larger cutters result in a better rolling action and are less apt to stop rolling. The rollers may be changed easily and quickly, it is explained, since a new and simple type of eccentric lock pin is employed in the head to retain them.

The type F cutter head also has side reamers, placed near the bottom of the bit, which tend to steady the bit in the hole as well as to insure full gauge hole. The direct, straightline flow of circulation washes directly on and between the cutters, thoroughly cleaning them and minimizing the possibility of balling up.

The core catcher in the bit is of improved design, and is placed at minimum distance from the mouth of the bit. It is a combination of spring and slip, which acquires a double grip on the core recovered. It is asserted that this core catcher will break off the hardest rock formations encountered in any coring operation.

The type F core bit is interchangeable with all other types of H. C. Smith cutter heads, making the Smith coring outfit adaptable to all formations from the soft sand chalk and anhydrites to the hardest schist quartz and chert.

WORTHINGTON COMPANY FORMED IN CALIFORNIA

The interests of the Worthington Pump & Machinery Corp., Harrison, N. J., in the California territory will be served hereafter through the Worthington Machinery Corp. of California, Ltd., with headquarters in San Francisco and Los Angeles. H. D. Cornell, who has been president of the Worthington Machinery Corp. of Oklahoma, will be president of and direct the new corporation, moving to California for that purpose. George W. Hawkins, who has been director of sales, will go with Worthington-California, as vice president.

The Worthington Machinery Corp. of California, Ltd., will take over the sales and engineering staff and the warehouse facilities of the Worthington Co., incorporated in California, and will handle all that territory. This arrangement, it is said, will make it possible to carry larger and more diversified stocks of Worthington products and parts and give more prompt service in California.

BUSINESS NOTES

J. R. Farrell has been transferred from the St. Louis office of the Gardner-Denver Co. to the Tulsa office as rock drill representative. E. H. Diamonds, formerly of the Andrews & George Co., agents in Japan, is associated with the San Francisco office as rock drill salesman.

The Doheny-Stone Drill Co., Los Angeles, Calif., is opening a Calgary office in charge of Ray C. Dellinger. Hydril rotary equipment will be featured.

The Chicago office of the Griscom-Russell Co. will be located in Room 1442, 20 North Wacker Drive, Chicago, after March 1.

T. M. Kerr, field sales manager in Oklahoma and Louisiana for Lucey Products Corp., has gone to California to make a survey of California drilling operations.

A. J. McCloskey sailed from New York on February 20 to take charge of a new office which the Lucey Products Corp. is opening in Maracaibo, Venezuela, South America.

The nineteenth annual report of President W. A. Olen to the stockholders of the Four Wheel Drive Auto Co., Clintonville, Wis., showed the increase in total sales in 1929 over 1928 was $1,063,000.

Walter Reid and J. W. Bartlett have formed a partnership as consulting engineers under the name of Reid & Bartlett, with an office in the Athletic Club Building, Dallas, Tex.

Jon R. Long, Fort Worth, Tex., manufacturer and distributor of oil country equipment, has contracted with the American Hammered Piston Ring Co. for the Texas distribution of the company's piston rings in the oil fields.

Walter J. Dukes has been appointed general sales manager of the Climax Engineering Co. of Clinton, Iowa. General sales office will be maintained at 111 West Monroe Street., Chicago.

J. L. Gonon, general sales manager of the Duryea Manufacturing Co., Bayonne, N. J., was in Tulsa recently introducing a new belt designed for oil country service.

The Fulmer Manufacturing Co. has established a sales office and warehouse in Seminole, Okla. O. L. Frame, field man and piston ring engineer, is to devote his time to piston, piston ring and cylinder problems.

The Link-Belt Co., Indianapolis and Los Angeles, will exhibit the new Link-Belt Hyper S8-40 (A.P.I. 3) and Hyper S8-124 (A.P.I. 4) rotary chains at the Los Angeles oil equipment show March 16 to 23.

NEW OFFICERS ARE ELECTED

At a meeting of the board of directors of the Connersville Blower Co., Inc., Connersville, Ind., John T. Wilkins, president and chief engineer, was chosen as general manager also. Bernard C. O'Brien, formerly in charge of sales in Pittsburgh, was elected secretary; W. E. Newkirk, purchasing agent, became treasurer, and E. C. Hassler, assistant superindendent, was appointed acting superintendent. The last three selections were to fill vacancies caused by the deaths of J. E. Huston, secretary-treasurer, and R. T. Huston, vice president and superintendent.

PUMP MOUNTING DEVISED FOR CORE DRILLING WORK

Of new design and manufacture is a specially made pump mounting on a McCormick-Deering Model 20 tractor for use in core drilling in field exploration work. This mounting was devised by the Resistcor Engineering Corp., of Tulsa.

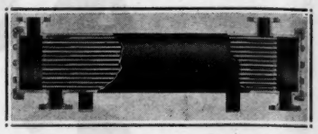
This mounting rests on the front and rear axles of the tractor which is equipped with L. H. Trackson full crawlers. The unit is thus made evenly balanced and can also be equipped to run on wheels or with D. H. Trackson crawlers. The pump is driven by power from the power take-off of the tractor by means of a short chain and sprocket through a transmission mounted over the left axle and attached to the frame mounting. This gives variation of three speeds for operation of the pump and three speeds forward and one reverse on the drawbar works of the tractor.

This unit can be used on pipe lines for testing purposes. The one illustrated here is being used by geological departments of oil companies for power for core drilling and also acts as power to operate the circulating mud and clear water pump in this kind of exploration work.

The gasoline tank is removed from its natural position and mounted on the left side of the motor to eliminate fire hazards. It is sturdily built throughout and is said to have been thoroughly proven in extensive field work.

BAFFLES NOT USED IN "EQUAFLO" EXCHANGER

To avoid the use of baffles and to increase the amount of surface in a given size of shell the Griscom-Russell Co., of New York, have designed and applied for patent on the G-R Equaflo heat ex-



changer shown in the accompanying illustration. The distinctive feature of this apparatus is the use of tubes swaged down at one end to permit closer spacing of the tubes in the shell and at the same time retain sufficient bridge wall in the tube sheets for strength.

The resulting design development of this unit is the elimination of cross baffles in the shells. In fact the exchanger receives its name "Equaflo" because the tubes are so spaced in the shell that the area of flow through the shell may be equal to the area of flow through the tubes. The G-R Equaflo exchanger is applicable to the efficient heat exchange between any two liquids or for use as a condenser or cooler. It is furnished in various arrangements and materials for different service requirements. This apparatus should be of particular interest to engineers and superintendents of petroleum refineries, natural gasoline recovery plants, chemical plants, etc.

TRADE LITERATURE RECEIVED

A new 16-page bulletin on the Elgin Zeolite water-softening system has just been published by the Elgin Softener Corp., Elgin, Ill.

A revised "Buyers' Guide, Nickel Alloy Steel Products," has been prepared by the International Nickel Co., Inc., New York.

"Electrical Equipment for Rotary Drilling," an eight-page bulletin published by the Westinghouse Electric & Manufacturing Co., describes the application, design and operation of motors and control used for rotary drilling. A curve shows how power requirements of rotary drilling are met by electric drive.

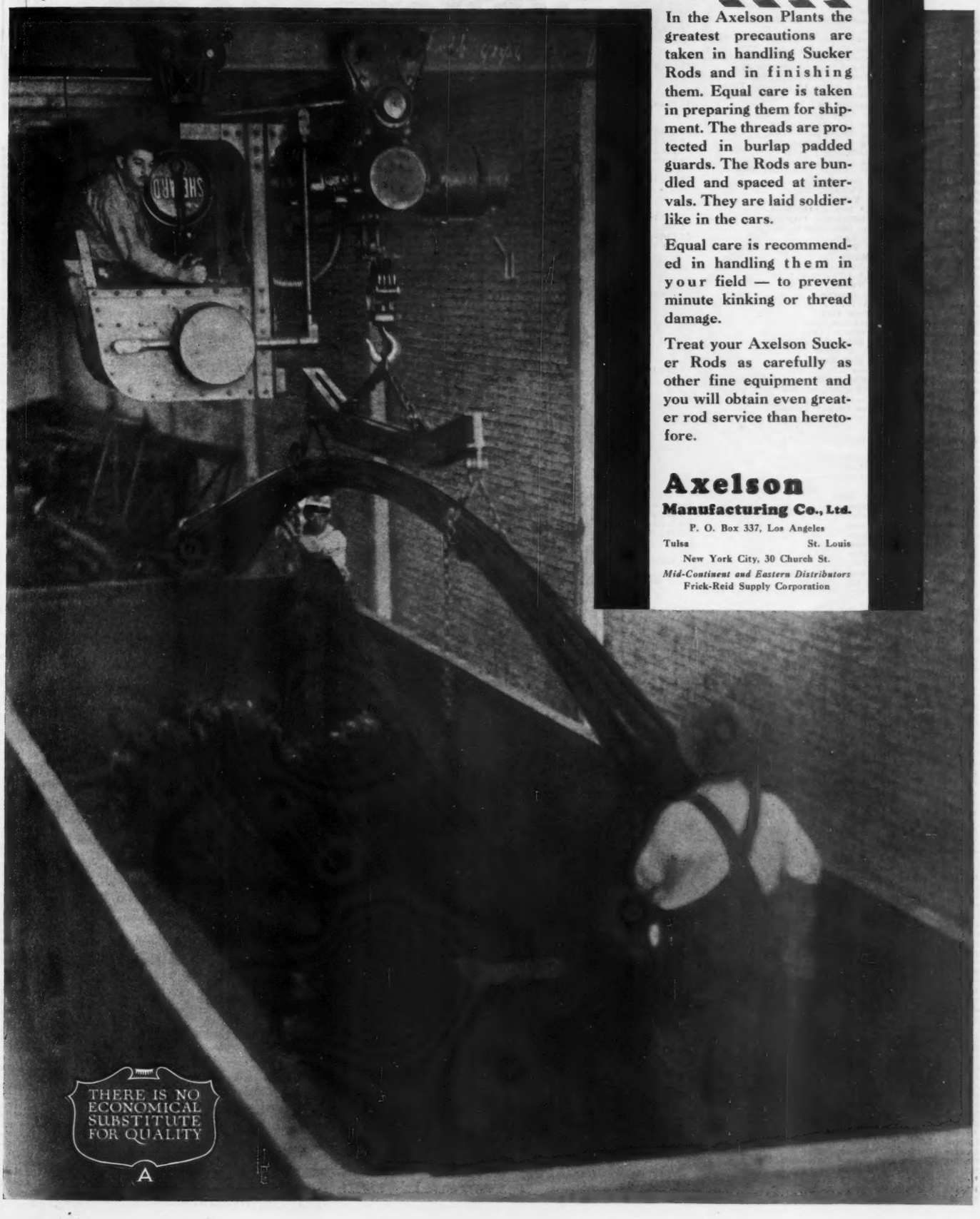
The Allis-Chalmers Manufacturing Co., Milwaukee, Wis., is sending out a bulletin on "Steel Frame Oil Well Motors." The Allis-Chalmers motor has sealed stator and rotor windings said to be resistant to corrosive substances.

"Production Control in Steel Foundry," by Rogers A. Fiske, has been reprinted from the Iron Age of October 17, 1929, by the Sivyer Steel Casting Co., Milwaukee. The article describes how the Sivyer shop uses checks, inspections and daily "pow-wows" to meet specifications and scheduled delivery dates.

The International Nickel Co., Inc., New York, has reprinted for distribution a paper, "The Manufacture of Nickel Steel Plate," from the transactions of the American Society of Mechanical Engineers. The authors are Charles McKnight, New York, and W. G. Humpton, Coatesville, Pa.

A history of core drilling, including the purpose, operation and construction of the Oil Well core drill as developed over a period of years, are contained in a 24-page catalog issued by the Oil Well Core Drilling Co., Los Angeles, Calif.

Applying **CARE** *in the shipment of* **AXELSON SUCKER RODS**



In the Axelson Plants the greatest precautions are taken in handling Sucker Rods and in finishing them. Equal care is taken in preparing them for shipment. The threads are protected in burlap padded guards. The Rods are bundled and spaced at intervals. They are laid soldier-like in the cars.

Equal care is recommended in handling them in your field — to prevent minute kinking or thread damage.

Treat your Axelson Sucker Rods as carefully as other fine equipment and you will obtain even greater rod service than heretofore.

Axelson
Manufacturing Co., Ltd.
P. O. Box 337, Los Angeles
Tulsa St. Louis
New York City, 30 Church St.
Mid-Continent and Eastern Distributors
Frick-Reid Supply Corporation

Oklahoma Gross Production for Fourth Quarter, 1929

Gross production report of fourth quarter of 1929, showing all production of $5,000 and upward, and all royalty of $2,000 and more. Names with asterisk opposite them indicate royalty owners, those without, are producers. Gas production is given in thousands of cubic feet.

A

Name and address—	Barrels	M. Feet	Amount
American Oil Development Co., Pittsburgh, Pa.	4,499.44	.....	$6,493.59
America Maracuba Co., New York, N. Y.	10,622.33	.....	20,950.40
American Refining Properties, Wichita Falls, Tex.	4,171.31	.....	6,771.82
American Oil & Refining Co., Oklahoma City	.....	.....	23,629.89
Amerada Petroleum Corp., Tulsa	.....	.....	30,680.66
Amerada Petroleum Corp., (suspense), Tulsa	729,633.22	.....	1,171,206.32
Amerada Petroleum Corp., (suspense), Tulsa	.....	1,357,555	64,577.12
American Oil Royalties Corp.,* (Seminole) Tulsa	.....	.....	3,229.39
American Royalty Petroleum Co.,* Tulsa	2,297.35	.....	4,145.19
Arthur Oil Co., Sistersville, W. Va.,	10,690.43	18,615	16,379.95
Atlantic Producing Co.,* Philadelphia, Pa.	.....	.....	7,554.33
Atlantic Oil Producing Co., Dallas, Tex.	.....	383,457	17,286.69
Atlantic Oil Producing Co., Dallas, Tex.	279,104.51	.....	415,634.84
Atlantic Oil Producing Co.,* Dallas, Tex.	8,206.38	14,482	14,302.94
Acme Royalty Co.,* Ardmore	5,290.29	.....	9,346.66
Anderson Prichard Oil Corp.,* Oklahoma City	9,493.04	.....	14,398.23
Anderson Prichard Oil Corp.,* Oklahoma City	.....	.....	12,092.80
Adams Royalty Co.,* Chicago, Ill.	57,215.15	.....	94,348.58
Adams Royalty Co.,* Chicago, Ill.	.....	Gas	5,513.45
Alco Royalty Corp.,* Tulsa	.....	141,672	11,460.56
Alma Royalties Corp.,* New York, N. Y.	.....	.....	16,302.49
Alma Petroleum Co., Oklahoma City	852.54	233,818	19,282.61
Arkansas Fuel Oil Co., Shreveport, La.	5,768.17	.....	6,584.93
Argo Oil Co., Denver, Colo.	27,170.05	.....	47,160.24
Atlas Royalty Corp.,* Tulsa	2,516.31	.....	3,746.40
Alexander, Minnie,* Maud	.....	.....	2,300.63
Allen, W. O.,* Tulsa	.....	.....	2,054.66
Atkinson, William H.,* Oklahoma City	.....	.....	6,892.95
Adamson, Peter, Jr., Tulsa	.....	.....	14,094.52
Armor Oil & Gas Co., Duncan	3,249.30	.....	5,664.34
Arnold, H. Y.,* Tulsa	.....	.....	2,028.66
Apple, S. A.,* Oklahoma City	.....	.....	16,857.26
Anderson, A. C.,* Oklahoma City	.....	.....	6,002.92
Andrews, Walter,* Weslaco, Tex.	.....	.....	2,147.84
Andrews, H. N., and Ethel B.,* Newkirk	.....	.....	6,317.22
Abraham, Joe, estate, Bristow	.....	.....	10,369.69
Athey, B. M., and R. B.,* Enid	.....	.....	2,730.00
Amster, N. L., Ardmore	5,158.10	.....	7,755.02
Andrews, Martha Nadine Tully nee,* Muskogee	.....	.....	2,680.07
Anderson, Nettie H., Charles and Wilmer,* Los Angeles, Calif.	.....	.....	9,663.24
Accumulative Royalties Corp.,* Tulsa	.....	.....	9,261.60

B

Briscoe, E. F.,* Chickasha	4,677.50	.....	14,258.30
Beaver Oil Co., Enid	3,129.38	.....	5,495.18
Blake, M. B.,* Oklahoma City	.....	.....	20,580.38
Brown, Robert H., attorney,* Duncan	.....	.....	4,736.67
Burroughs, O. W.,* Shawnee	.....	.....	4,592.97
Burns, C. D., Preston	.....	.....	16,392.21
Bixby, Ina Gardner,* Enid	.....	.....	9,493.64
Barnsdall Oil Co., Tulsa	220,381.88	.....	299,158.70
Barnsdall Oil Co., Tulsa	1,147.28	.....	1,659.73
Barnsdall Oil Co., Tulsa	469,310.66	.....	745,250.15
Barnsdall Oil Co., Tulsa	75,831.22	.....	117,691.84
Barnsdall Oil Co., Tulsa	7,511.10	.....	12,374.60
Barnsdall Oil Co., Tulsa	.....	661,170	38,825.34
Barnsdall Oil Co.,* Tulsa	1,835.92	.....	2,486.61
Barnsdall Oil Co.,* (suspense)* Tulsa	.....	.....	8,280.79
Blackwell Oil & Gas Co., Cushing	Oil	.....	33,326.28
Blackwell Oil & Gas Co., Cushing (No bbls. or feet given)	.....	Gas	6,561.30
Bryan Petroleum Co., Tulsa	14,759.36	36,580	29,316.79
Bridwell Oil Co., Wichita Falls, Tex.	6,339.76	.....	8,462.81
Bay State Oil & Gas Co., Kansas City, Mo.	12,624.30	.....	20,050.88
Bart Royalty Co.,* Bartlesville	6,550.36	.....	10,701.40
Barbara Oil Co., Chicago, Ill.	6,935.32	33,609	11,869.44
Brandenburg Bros.,* Norman	.....	.....	35,002.29
Brandenburg & Sons, John B., and Michael, Norman	.....	.....	4,731.69
Benedum-Trees Oil Co., Pittsburgh, Pa.	63,760.76	.....	97,033.00
Beard, J. G., and S. I. Kolb, Duncan	6,314.76	.....	9,546.71
Beard, J. G.,* Duncan	.....	.....	2,512.00
Banta, William M.,* Tecumseh	.....	.....	3,815.71
Bissett, Lytle and Gray, Tulsa	14,248.96	.....	18,407.60
Boring, O. M., and Effie, Hobart	.....	.....	16,078.49
Boggs, Charles W., Los Angeles, Calif.	5,321.30	.....	6,018.16
Barrett, Mrs. Mary E., Austin, Tex.	1,762.58	.....	2,517.35
Babcock Bros., Denison, Tex.	9,796.50	.....	16,726.04
Boring, E. M., Oklahoma City	12,958.17	2,796	18,121.44
Braman Oil Co., Inc., Tulsa	3,620.03	.....	5,843.00
Braden and Moore, Tulsa	5,745.36	.....	8,354.61
Breene, Mabel Gray, Tulsa	4,307.84	.....	6,553.03
Breene, Frank M., trust estate, Tulsa	5,596.46	.....	7,864.75
Bourdon, Mrs. Lemon C. Blandin,* Topeka, Kans.	.....	.....	2,319.13
Burkhalter, L. J.,* Blackwell	.....	.....	2,547.42
Bridgeford, J. R., & Co., New York, N. Y.	.....	.....	4,877.71
Beverlin, F. A.,* Wichita, Kans.	.....	.....	12,333.59
Bridgman, F. R.,* Loudon, Ohio	.....	.....	2,301.98
Broyles, W. O.,* Stillwater	.....	.....	2,401.54
Brame, I. L.,* Los Angeles, Calif.	.....	.....	2,028.56
Barnum, Hubert,* Natchez, Miss.	.....	.....	2,297.83
Bennett, John H.,* Ardmore	.....	.....	2,097.56
Bird, J. W., and William Bird, Bradford, Pa.	4,521.38	.....	6,164.52
Berryhill, Earl,* Sapulpa	.....	.....	3,340.18
Baldwin and Sutton, Walters	21,929.36	.....	29,056.31
Braymer, A. L.,* Tulsa	.....	.....	3,008.20
Billington, C. B.,* Shawnee	.....	.....	24,462.48
Bole, George S.,* Tulsa	1,305.94	.....	2,365.23
Bole, George S., Tulsa	9,564.38	14,732	15,012.33
Beck, O. U., Nacona, Tex.	31,720.93	.....	41,826.56
Brown, S. J.,* Duncan	.....	.....	2,556.84
Ballard, Elizabeth, executrix,* Cushing	.....	.....	3,925.96
Blasdel, May,* Woodward	.....	.....	2,423.18
Baker and Strawn, Tulsa	.....	.....	10,718.19
Baker, George E.,* Oklahoma City	.....	.....	10,200.68
Berry, W. E., Stillwater Natl. Bank, administrator, Stillwater	.....	.....	6,545.04
Belco Royalties, Inc.,* New York City	.....	.....	44,268.49
Berry, I. G., Shawnee	.....	.....	3,021.72
Berry, Thomas N. and Harriett,* Stillwater	.....	.....	8,555.46
Berry, G. M.,* Pawnee	.....	.....	6,903.15
Berry Petroleum Co., Tulsa	9,243.68	6,162	14,176.33
Bradley, E. A., deceased, and Anna Bradley, Tulsa	4,660.31	.....	6,273.70
Britton-Johnson Oil Co., Tulsa	5,364.02	.....	5,986.78
Brittain, W. L.,* Oklahoma City	.....	.....	2,420.97
Born, H. A.,* Seminole	.....	.....	2,951.05
Brown, J. J., Jr.,* Wichita, Kans.	.....	.....	4,728.82
Brown, A. C., Oil Enterprise, St. Louis, Mo.	3,699.97	.....	5,005.90
Bodine, Louise,* Oklahoma City	.....	.....	11,745.46
Bodine, Orville,* Oklahoma City	.....	.....	4,161.60
Bodine, Sonora and John,* Oklahoma City	.....	.....	12,216.13
Bodine, Louise,* Oklahoma City	.....	.....	11,745.46
Bodine, Ruby,* Scranton, Kans.	.....	.....	3,870.28
Bodine, Harry,* Scranton, Kans.	.....	.....	3,870.00
Bodine, H. A.,* Scranton, Kans.	.....	.....	3,870.00
Bodine, Leo,* Scranton, Kans.	.....	.....	3,870.00
Buckner, Roy,* Wewoka	.....	.....	2,147.91
Burke-Greis Oil Co., Tulsa	232,859.43	.....	364,639.67
Burke-Greis Oil Co., Tulsa	.....	Gas	45,016.55
Burke-Greis Oil Co.,* Tulsa	5,739.14	.....	11,042.45
Buchner, Guy M.,* Holdenville	.....	.....	3,456.91
Burlingame, G. C., Corp., Bartlesville	4,226.59	.....	6,840.81
Burk, George T.,* Shawnee	.....	.....	2,212.63
Bumpass, J. M.,* Duncan	2,347.96	.....	2,340.92
Bullock, U. M.,* Shawnee	.....	.....	4,724.70
Butcher, Lucile and N. E.,* Oklahoma City	.....	.....	2,638.11
Button, Robert,* Oklahoma City	.....	.....	2,587.00
Brunton, Fannie,* Oklahoma City	.....	.....	7,328.69
Button, Alex,* Oklahoma City	.....	.....	8,622.29
Button, George,* Oklahoma City	.....	.....	4,092.97
Bush, L. L.,* Chickasha	.....	.....	2,505.67
Buck, William,* Wetumka	.....	.....	3,206.39
Buttram, Frank,* Oklahoma City	.....	.....	16,214.75

C

Chieftan Royalties Corp.,* Tulsa	2,735.65	.....	4,748.64
Cromwell-Franklin Oil Co., Oklahoma City	239,913.69	.....	384,232.61
Cortez Oil Co., Tulsa	4,851.28	.....	7,913.25
Coline Oil Co., Oklahoma City	333,219.42	.....	535,608.72
Coline Oil Co., Oklahoma City	.....	Gas	18,354.16
Coline Oil Co., Oklahoma City	40,711.77	.....	35,439.83
Comar Oil Co., St. Louis	620,002.28	.....	1,088,476.75
Comar Oil Co., St. Louis, Mo.	.....	556,995	40,663.72
Commercial Drilling Co., Tulsa	4,268.68	.....	5,521.95
Champlin Refining Co., Enid	195,266.18	.....	328,039.89
Champlin Refining Co., Enid	.....	Gas	29,188.31
Cudahy Oil Co., Cleveland, Ohio	12,075.09	.....	15,015.34
Conservation Oil Co., Tulsa	6,790.59	.....	9,886.55
Carter, Joe,* Wewoka	.....	.....	2,069.41
Carter Oil Co., Tulsa	2,752,016.42	.....	4,082,315.56
Carter Oil Co., Tulsa	.....	Gas	287,614.33
Carter Oil Co. (suspense),* Tulsa	.....	.....	75,135.64
Continental Oil & Refining Co., Independence, Kans.	4,466.47	.....	5,962.66
Continental Oil Co., Ponca City	549,820.59	1,367,325	854,681.10
Creo Oil Co., Tulsa	8,607.58	.....	11,304.73
Cal-Cul Oil Co.,* Okmulgee	.....	.....	4,487.93
Cities Service Gas Co., Bartlesville	.....	921,239	81,429.30
Cities Service Gas Co., Bartlesville	.....	70,725	5,658.00
Cities Service Gas Co. (suspense), Bartlesville	.....	409,087	28,636.09
Central Royalty Co.,* Tulsa	.....	.....	2,656.33
Central Petroleum Co., Tulsa	6,410.33	.....	9,509.08
Central National Bank, trustee,* Okmulgee	.....	.....	2,622.45
Central Commercial Oil Co.,* Tulsa	4,079.50	.....	6,512.95
Central Oil Royalties, Inc.,* New York City	.....	.....	3,416.68
Commonwealth Trust Co., Okmulgee	4,936.77	.....	6,487.08
Canadian Royalty Oil Co.,* London, Ontario, Canada	.....	.....	6,126.97
Cosden, J. S., Inc., of Oklahoma, Fort Worth, Tex.	317,298.88	.....	537,164.26
Consolidated Pipe Line Co. (suspense), Sand Springs	.....	.....	7,579.89
Consolidated Gas Utilities Co., Oklahoma City	.....	646,557	47,674.56
Cook, Annie S.,* Muskogee	.....	.....	2,448.98
Cook, Annie S.,* Muskogee	.....	.....	7,998.45
Cook, Charles B.,* Oklahoma City	.....	.....	2,687.52
Clubb, I. M.,* Kaw	5,171.26	.....	8,509.72
Connelly, G. W.,* Caney, Kans.	.....	.....	8,040.01
Cremer, H. O., and Jessie Cremer,* Tecumseh	.....	.....	2,361.27
Cozard, L. W., guardian, William Jones,* Wewoka	.....	.....	8,113.48
Creager, C. E., trustee, Muskogee	6,309.52	.....	10,501.26
Cecil, W. H.,* Tecumseh	.....	.....	2,221.66
Canary, S. C., Tulsa	6,251.85	.....	8,318.93
Casperson, Joe, Tulsa	3,239.17	.....	6,034.35
Carmichael, Dorothy,* Tonkawa	.....	.....	3,499.50
Cruce, M. K.,* Oklahoma City	.....	.....	2,806.66
Culbertson, R. R.,* Maud	.....	.....	6,176.45
Creach, E. R.,* Wewoka	.....	.....	3,247.24
Chisum, Jr., W. C.,* Oklahoma City	.....	.....	3,855.23
Chisum, Sr., W. C.,* Oklahoma City	2,391.81	.....	3,839.97
Comegys, W. B.,* Oklahoma City	.....	.....	13,587.29
Crane, T. R., trustee,* Mannford	.....	.....	22,823.00
Collins, June H.,* Tulsa	.....	.....	3,459.00
Cochran, A. D.,* Okmulgee	.....	.....	8,745.36
Corey, H. M.,* Bristow	.....	.....	2,458.02
Carpenter, Wm. G.,* Lees Summit, Mo.	.....	.....	4,934.11
Colbert, Betty,* Morris	.....	.....	2,078.75
Cox, Anna Elizabeth,* Ardmore	.....	.....	2,625.10
Cline, Wm. S.,* Newkirk	.....	.....	3,043.60
Cline, Wm. S., trustee,* Newkirk	.....	.....	2,334.18
Calsow Oil Co., Tulsa	3,722.45	.....	5,460.51
Critchlow, W. S., Ardmore	6,578.71	.....	10,310.63
Caudill, Samuel T.,* Tulsa	1,330.04	.....	2,106.10
Cherry, C. C. and Laura,* Maud	.....	.....	3,518.52
Cherry, V. H.,* Lindsay	.....	.....	2,923.93
Cherry, L. L.,* Lindsay	.....	.....	2,512.75
Crenshaw, Gordon P.,* Jonesboro, Ark.	.....	.....	5,088.61
Crenshaw, Mrs. Gordon P., Jonesboro, Ark	.....	.....	7,794.76
Crook, Minnie D.,* Denver, Colo.	.....	.....	6,179.70
Croxton, E. V. and E. O., Norman	1,504.47	.....	2,014.62
Chesnut, O. G., Oklahoma City	.....	.....	8,495.84
Chesnut, Harold G., Oklahoma City	.....	.....	2,210.87
Clark, Dillard H., Jr.,* Ponca City	.....	.....	3,388.44
Campbell, J. D.,* Seminole	.....	.....	15,901.63
Crews, L. E., heirs, Enid	1,112.45	.....	2,058.01
Crews, L. E., heirs, Enid	7,786.93	7,019	15,070.70
Crosbie, J. E., Inc., Tulsa	6,555.30	.....	7,559.00
Crosbie, J. E., Inc., Tulsa	39,728.19	19,233	62,193.83
Crosbie, J. E., Inc., Tulsa	704.88	349,383	5,454.49
Carpenter, H. C.,* Elizabeth, N. J.	.....	.....	2,358.58
Caddo Oil Co., Tulsa	22,268.89	.....	30,884.48
Columbia Royalty Co.,* Tulsa	1,241.67	.....	2,152.48
Connell Oil, Inc.,* Denver Colo.	.....	.....	3,557.45
Colonial Royalties Co.,* Tulsa	.....	.....	5,988.97
Central National Oil Co., Okmulgee	.....	.....	51,025.67
Comail Oil Co., Drumright	.....	.....	5,259.23

D

Devonian Oil Co., Tulsa	262,574.21	.....	436,203.21
Devonian Oil Co., Tulsa	.....	Gas	21,364.79
Deep Rock Oil & Ref. Co., Tulsa	22,252.00	154,621	37,414.49
Dickson Oil Royalty Co.,* Tulsa	.....	.....	4,626.66
Dickson, L. J.,* Tulsa	.....	.....	3,290.45
Dickson, J. H.,* Tulsa	11,026.68	.....	19,360.53
Dixie Oil Co., Inc., Tulsa	246,483.31	134,423	404,461.00
Delk Investment Corp.,* St. Louis, Mo.	.....	.....	3,947.38
Doss Oil Royalty Co.,* Oklahoma City	12,032.44	.....	16,682.63
Duncan-Wichita Falls Pipe Line Co., Wichita Falls, Tex.	14,990.02	.....	23,381.30
Denver Prod. & Ref. Co., Okmulgee	27,185.89	.....	43,137.17
Denver Prod. & Ref. Co., Okmulgee	35,142.74	.....	55,910.54
Delaware Consolidated Oil Co., Tulsa	45,655.15	.....	56,766.67
Delmar Oil Co., Bartlesville	14,072.56	13,327	23,830.96
Darby Lynde Co., Tulsa	49,385.79	19,485	78,495.41
Darby Lynde Co., Tulsa	.....	10,836	1,141.08
Darby Lynde Co.,* Tulsa	1,957.57	2,839	3,125.58
Davis, B. F.,* Wewoka	.....	.....	26,164.73
Davis, Mildred,* Oklahoma City	.....	.....	2,398.91
Davis, E. D.,* Oklahoma City	5,200.59	.....	6,240.04

(Continued on Page 98)

STRONG & TOUGH

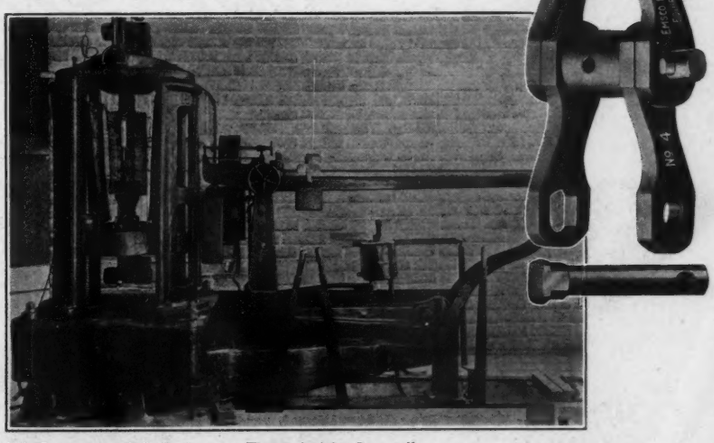
EMSCO

CHROME VANADIUM STEEL

SPROCKET CHAIN

UNQUESTIONABLY THE STRONGEST CHAIN MADE

The illustration below shows the apparatus used by the Los Angeles Testing Laboratories in testing Emsco Sprocket Chain. The results of this test show a conservative rating of breaking strength for No. 3...85,000 lbs., and No. 4...155,000 lbs. Each piece and link of this chain is very carefully inspected.



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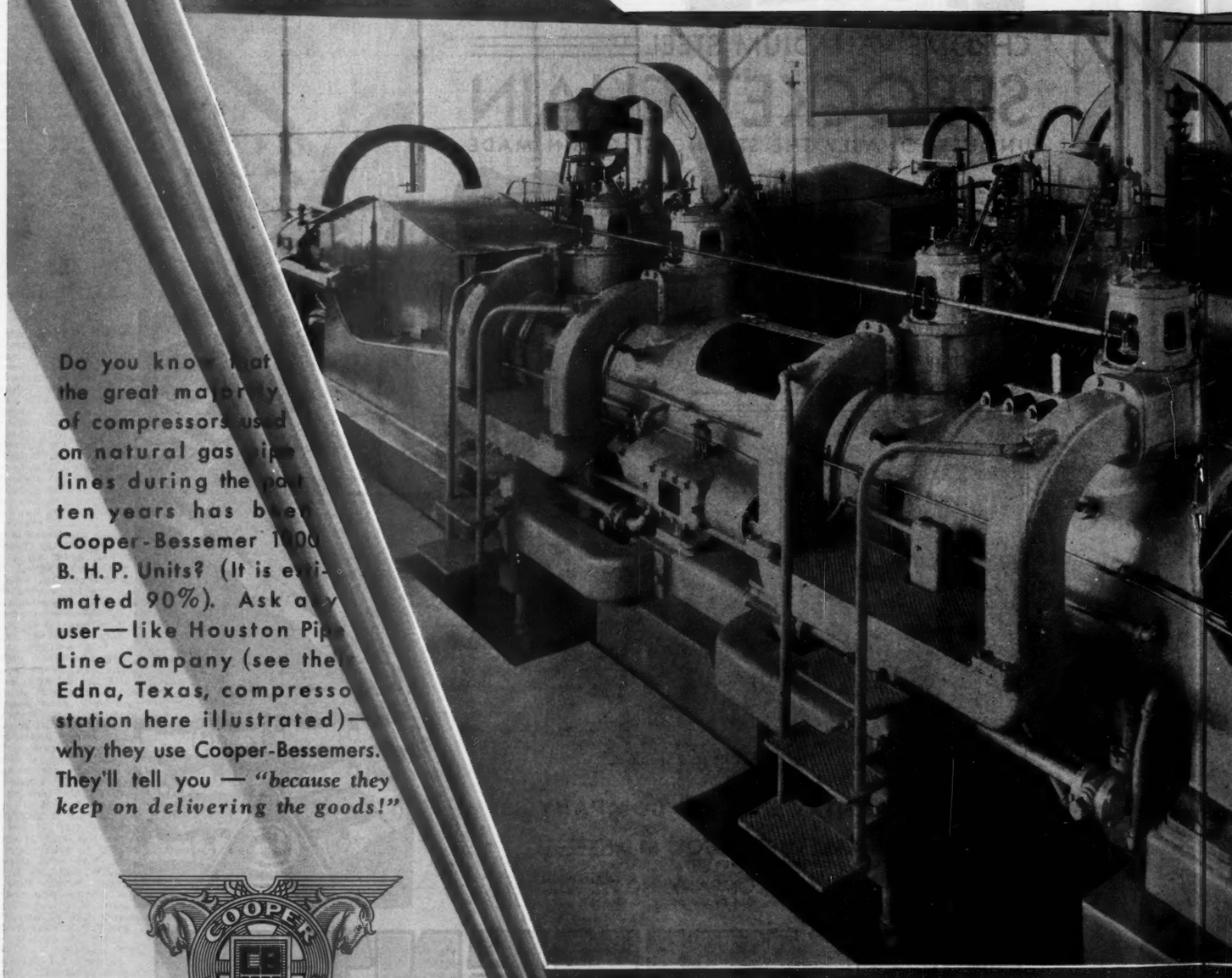
THE CONTINENTAL SUPPLY CO., LTD.
224 Traders Building, Calgary, Alberta, Canada

Export Offices: CONTINENTAL EMSCO COMPANY, INC. 74 Trinity Pl. New York—
London Offices: 316-17 Dashwood House, Old Broad St., E. C. 2

J548

CONTINENTAL

BECAUSE TH
DELIVERING

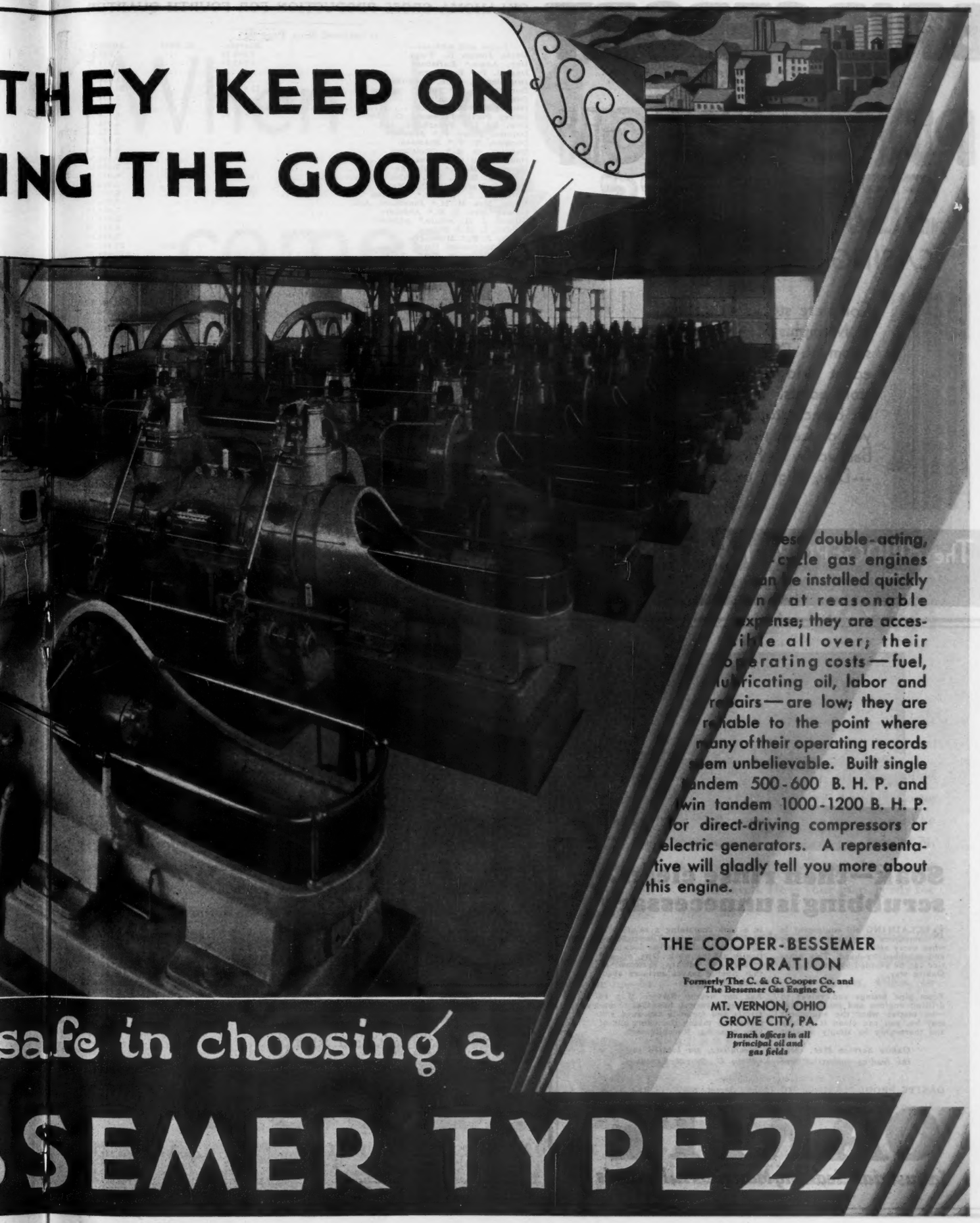


Do you kno[w] [t]hat the great ma[jo]rity of compressors us[ed] on natural gas [pi]pe lines during the [pa]st ten years has b[ee]n Cooper-Bessemer 1[00] B. H. P. Units? (It is es[ti]mated 90%). Ask a[ny] user—like Houston Pi[pe] Line Company (see the[ir] Edna, Texas, compresso[r] station here illustrated)—why they use Cooper-Bessemers. They'll tell you — *"because they keep on delivering the goods!"*

COOPER BESSEMER

You're always saf

COOPER-BESS



...est double-acting, ...cycle gas engines ...an be installed quickly ...n at reasonable ...xpense; they are acces- ...ible all over; their ...perating costs — fuel, ...ubricating oil, labor and ...repairs — are low; they are ...liable to the point where ...many of their operating records ...seem unbelievable. Built single ...tandem 500-600 B. H. P. and ...twin tandem 1000-1200 B. H. P. ...for direct-driving compressors or ...electric generators. A representa- ...tive will gladly tell you more about this engine.

THE COOPER-BESSEMER CORPORATION
Formerly The C. & G. Cooper Co. and The Bessemer Gas Engine Co.
MT. VERNON, OHIO
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Branch offices in all principal oil and gas fields

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OFFERS YOU
PITTSBURGH
SEAMLESS
CASING AND DRILL PIPE

Complete stocks of casing at Memphis for immediate shipment. Drill pipe stocked at Bridgeport's rotary store points. Let our nearest branch store figure with you on Casing & Drill Pipe. Backed by 24 Hour Service ---Day, Night or Sunday.

The BRIDGEPORT MACHINE CO.
GENERAL OFFICES AND FACTORY, WICHITA, KANSAS
Branches Throughout the Oil Fields

Soak—then rinse clean.. scrubbing is unnecessary

RECLAIMING old equipment is sometimes a costly process when every article must be scraped and scrubbed by hand. This practice can be avoided by cleaning the Oakite way.

From pipe fittings and valves to drilling engines and rotary tables —no matter what the equipment may be, you can clean it rapidly and thoroughly by simply soaking in a tank containing a solution of an Oakite material. The vigorous, powerful cleaning action does practically all the work. Dirt, oil and grease are quickly loosened so that rinsing leaves surfaces absolutely clean.

Ask our nearby Service Man to call and show you how Oakite materials and methods can save you money by taking the effort out of your cleaning. No obligation.

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OAKITE
TRADE MARK REG. U.S. PAT. OFF.
Industrial Cleaning Materials and Methods

OKLAHOMA GROSS PRODUCTION FOR FOURTH QUARTER

(Continued from Page 94)

Name and address—	Barrels	M. Feet	Amount
Davis, Joseph D., Tulsa	3,502.20	.....	5,565.55
Day, Annie,* Earlsboro	1,541.70	.....	2,618.17
Day, J. F.,* Earlsboro	.....	.....	2,370.75
Droppleman, John, Wewoka	.....	.....	8,488.34
Doneghy, J. C.,* Tulsa	11,950.00	.....	20,191.80
Denney, C. E.,* Alma	.....	.....	2,058.47
Denney, C. E., Alma	.....	.....	2,862.18
Dewey Portland Cement Co., Dewey	4,800.32	.....	6,777.53
Dew, Ed L.,* Texarkana, Ark.	.....	.....	2,024.24
Dolman, Jessie P.,* Ardmore	.....	.....	2,176.26
Douglas, H. T.,* Shawnee	.....	.....	3,847.78
Douglas, O. H.,* Okmulgee	.....	.....	6,652.68
Douglas Oil Co., Tulsa	.....	.....	3,596.00
Douglass, M. S.,* Weleetka	.....	.....	3,688.59
Downing, R. E., Inc., Tulsa	4,463.19	.....	6,017.02
Dodson, Marguerite C.,* Maud	.....	.....	2,882.26
Dilley, W. Y., trustee,* Waurika	3,813.37	.....	3,695.20
Dillon, Mrs. M. H.,* Jonesboro, Ark.	.....	.....	7,794.76
Dillard, Mrs. V. E.,* Ardmore	.....	.....	7,368.63
Dillard, J. H., estate,* Ardmore	.....	.....	5,878.31
Dillard, L. H.,* Daisey	.....	.....	6,327.59
Darby, J. F.,* Muskogee	.....	.....	2,476.40
Darby Petroleum Corp., Tulsa	.....	Gas	27,406.33
Darby Petroleum Corp., Tulsa	434,286.72	.....	677,699.56
Duff, Delos B., Cleveland, Ohio	.....	.....	5,126.97
Decker, G. W.,* Stratford	.....	.....	3,324.63
E			
Empire Oil & Refining Co., Bartlesville	579,720.15	.....	760,406.35
Empire Oil & Refining Co., Bartlesville	.....	Gas	35,296.35
Empire Oil & Refining Co.,* Bartlesville	27,535.23	.....	42,649.31
Empire Oil & Refining Co.,* Bartlesville	.....	Gas	1,492.34
Empire Oil & Ref. Co.,* Bartlesville (suspense)	.....	.....	82,307.41
Eagle Picher Lead Co., Henryetta	2,511.46	61.701	7,041.56
Enid Bank & Trust Co., trustee, Enid	.....	.....	6,273.65
Eastern Royalties Corp.,* New York City	.....	.....	6,823.50
Equitable Royalty Corp.,* Oklahoma City	.....	.....	14,088.48
Exchange Trust Co.,* Tulsa	.....	.....	5,559.49
Exchange Trust Co.,* Tulsa	.....	.....	2,527.66
Exchange Trust Co.,* Tulsa	.....	.....	4,189.60
Exchange Trust Co.,* Tulsa	.....	.....	3,452.95
Exchange Trust Co.,* Tulsa	.....	.....	8,496.09
Ellison, Grace B.,* Okmulgee	1,498.98	.....	2,567.36
Elswick, P. C.,* Lamont	.....	.....	6,324.74
Emery, Lewis, Jr., & Sons, Bradford, Pa.	4,893.97	.....	6,488.99
Engineers Royalty, Inc.,* New York, N. Y.	.....	.....	6,332.19
Eason, T. T.,* Enid	2,762.78	.....	4,782.87
Eason Oil Co., Enid	22,410.66	.....	37,317.95
Eason, T. T., Enid	2,868.35	.....	4,269.03
Eason Oil Co.,* Enid	.....	.....	13,959.76
Eureka Royalty Co.,* Tulsa	1,631.51	.....	2,558.33
Elaine Oil Co.,* Tulsa	1,615.22	.....	2,608.29
Edison, Ida Gibiet,* Oklahoma City	.....	.....	4,315.94
Elliott, Anna May,* Lawrence, Kans.	.....	.....	5,985.33
Elliott & Vensel, Tulsa	6,372.22	.....	7,303.66
Elm Oil Co., Tulsa	7,703.79	.....	10,512.12
Elm Oil Co., Tulsa	.....	19.374	521.74
Elm Oil Co.,* Tulsa	.....	.....	4,043.39
Erlewine, A. J., et al, Wilson	6,392.94	.....	8,613.37
F			
Franklin, Wirt, Petroleum Corp., Ardmore	496,072.46	.....	720,045.97
Franklin, Wirt, Petroleum Corp., Ardmore	.....	Gas	37,025.67
Franklin, Wirt, Ardmore	243,099.12	.....	392,019.46
Franklin, Wirt,* Ardmore	9,836.55	.....	13,586.07
Franklin, Wirt, and Mary Cecil Cates,* Liberty National Bank trustee for, Oklahoma City	1,841.54	.....	2,506.26
Franklin, Wirt,* Liberty National Bank trustee for, Oklahoma City	3,851.61	.....	5,064.66
Foster Petroleum Corp., Bartlesville	484,706.04	.....	751,964.63
Foster Petroleum Corp., Bartlesville	.....	20,268	1,429.66
Foster Petroleum Corp.,* Bartlesville	58,027.71	.....	90,794.88
Foster Oil Co., Tulsa	7,459.24	.....	9,096.42
Foster & Davis, Inc., Bartlesville	8,656.72	.....	12,247.07
Foster, Willard,* Tulsa	.....	.....	14,110.27
Foster, James F.,* Anthony, Kans.	.....	.....	3,706.32
Five Sta.es Royalty Investment Co.,* New York, N. Y.	.....	.....	9,933.22
Fuhrman Petroleum Co., Okmulgee	10,937.97	.....	15,377.90
Fuhrman Petroleum Co., Okmulgee	.....	Gas	6,073.15
Fuhrman Petroleum Co., Okmulgee	.....	C.H.G. 225,459	2,687.60
Fern Oil & Gas Co., Yale	6,023.68	.....	9,063.03
Fort Ring Oil & Gas Co., Fort Worth, Tex.	5,458.58	.....	8,076.33
Franks, W. H.,* Seminole	.....	.....	9,317.09
Franks, Rosa,* Seminole	.....	.....	5,268.13
Fleet, Carl,* Ada	.....	.....	2,510.78
Fleet, D. F., and John J., and W. B. Osborn,* Ada	.....	.....	2,492.53
Fleet, Alice, guardian,* Ada	.....	.....	7,133.45
Fleet, Alice,* Ada	.....	.....	5,372.11
Fleet, John,* Ada	.....	.....	5,596.29
Fleet, D. F.,* Ada	.....	.....	21,415.43
Fleet, J. H., by guardian, W. B. Osborn and estate of,* Ada	.....	.....	2,921.16
Farley, Ethel,* Oklahoma City	.....	.....	2,398.91
Folk, H. B.,* Sand Springs	3,229.01	.....	3,619.77
Fyke, Laura L.,* Shawnee	.....	.....	3,808 91
Fay, John and Nellie,* Oklahoma City	.....	.....	4,416.00
Flynn Oil Co., Oklahoma City	4,106.32	.....	6,214.88
Flynn Oil Co.,* Oklahoma City	.....	.....	5,682.88
Flinn & Bovaird, trustee,* Tulsa	.....	.....	8,221.49
Farwell, Faye Katherine,* Chickasha	.....	.....	2,152.44
Farwell, K. C.,* Chickasha	.....	.....	7,608.53
Findley, E. G.,* Cleveland	.....	.....	3,130.03
Fondren, W. W.,* Houston, Tex.	1,762.59	.....	2,517.36
Finance Oil Co., Gowanda, N. Y.	12,218.51	.....	17,111.81
Franchot, D. W., & Co., Tulsa	31,395.12	.....	49,675.58
Fitzgerald, D. C., trustee, Ardmore	5,554.18	.....	5,773.69
Fitzgerald, H. L.,* Tulsa	.....	.....	2,004.60
Flanagan, J. P.,* Tulsa	5,149.85	.....	5,605.83
Franz, Fritz,* Deer Creek	.....	29,274	2,341.92
Fennell, Blanch,* Oklahoma City	.....	.....	2,398.91
Fortson, Effie M.,* Oklahoma City	.....	.....	6,599.54
Fuzzell, Joe,* Oklahoma City	.....	.....	70,043.89
Fuzzell, Joe,* Oklahoma City	.....	.....	7,636.25
Fuzzell, A. P.,* Oklahoma City	.....	.....	4,414.70
Fortson, W. E.,* Oklahoma City	.....	.....	2,398.91
Fried, Samuel, estate, Boyd B. Horsman, administrator,* Sulphur	.....	.....	7,011.70
French, Mollie B., Clearview	.....	215,549	17,729.22
Federal Tax Co.,* Oklahoma City	.....	.....	2,394.80
Fox Royalty Co., Tulsa	4,235.52	.....	5,031.23
G			
Gypsy Oil Co., Tulsa	3,196,286.56	.....	5,040,448.18
Gypsy Oil Co., Tulsa	.....	4,867,253	240,242.72
Gypsy Oil Co.,* Tulsa	1,908.52	.....	2,628.53
Gypsy Oil Co. for Patty Spence Ludey	4,146.24	.....	5,551.05
Gypsy Oil Co. for Laurel Oil & Gas Co.	51,160.37	.....	106,057.57
Gypsy Oil Co. for Laurel Oil & Gas Co.	6,599.83	.....	12,679.19
Gypsy Oil Co. for Laurel Oil & Gas Co.	.....	.....	18,512.27

(Continued on Page 103)

When the G.T.M. comes in . .

watch the COSTS go down

The G.T.M.—Goodyear Technical Man—has a practiced eye for costs. He is expert in the application of Mechanical Rubber Goods to industry. With lowered costs always clearly his object, he sits in on all jobs. Whether your problem is effective transmission of power, goods, air, or liquid, he knows a way to get the job done easily, swiftly, and at lowest cost. He has many times counseled industries similar to yours, smoothed their way. He can do for you, *positively and expertly*, what he has done for others.

All aspects of the oil business have long been familiar to the G.T.M. To the fields he has supplied the nearly stretchless Goodyear Compass Oil Well Belt with remarkable savings in belt costs. For rotary drilling he has specified rugged Goodyear High Pressure Rotary Hose. To the entire industry he has introduced the phenomenal Emerald Cord V Belt. To distribution he has supplied Goodyear Oil Suction and Discharge Hose. Tank wagons and tankers alike know the value of his work. The G.T.M. knows the oil business and where money can be saved. He is your man, ready for your job.

For full information on savings the G.T.M. can bring to your business, write to Goodyear, Akron, Ohio, or Los Angeles, California.

THE GREATEST NAME IN RUBBER

GOODYEAR

HOSE BELTING MOLDED GOODS PACKING

MEN KNOWN IN OILDOM

Warren L. Todd

Warren L. Todd's entrance into the oil business was about as nearly accidental as things can be. In 1901, at the age of 19, he was on his way from Bryan County, Georgia, to Houston, Tex., in search of a job. Inquiring the reason for the throng around the railroad station in Beaumont, Tex., he was told about the oil well which had been struck and which later proved the forerunner of the Spindle Top boom. He left the train and got a job digging slush pits and doing other manual work around drilling wells.

The Rio Bravo Oil Company soon employed him as a gauger. From 1904 until 1906 Mr. Todd worked for the J. M. Guffey Oil Company (later the Gulf Production Company) as a gauger at Batson, Tex. Then for five years he was in the oil business for himself. In 1911 he was farm boss for the Sun Oil Company on its properties at Vivian, La. After a year of this he went to Shreveport as superintendent of production for the Atlas Oil Company.

Mr. Todd went to Tulsa in 1918 as vice president of the United Central Oil Company, subsidiary of the United Gas & Electric Company, going to Dallas, Tex., two years later when the company's offices were moved to that city. When the United Central Oil Company was merged with the White Oil Corporation in 1922 the headquarters of the combined companies were established in Houston and Mr. Todd lived in that city for eight months while details of the consolidation were being attended to. Then he returned to Dallas and organized the Trinity Drilling Company. In 1924 he sold this to the Simms Oil Company and joined that organization as vice president in charge of production, which position he retains.

PERSONAL PARAGRAPHS

F. W. Richards has left Maracaibo, Venezuela, for a visit to England.

* * *

William G. de Koch has been re-elected president of the Cypress Petroleum Company of California.

* * *

Paul Gaurin, of the Shell Petroleum Corporation, St. Louis, Mo., has been visiting the Mid-Continent.

* * *

C. P. Parsons, of the Halliburton Oil Well Cementing Company, has been East on a business trip.

* * *

Walter E. Clete of New York City has been investigating a number of propositions in Central Wyoming.

* * *

Dr. E. R. Lederer, vice president of the Texas Pacific Coal & Oil Company, spent some days in Tulsa last week.

E. R. Osburn, chief engineer, the Texas-Empire Pipe Line Company, has moved from Lowry City, Mo., to Hayworth, Ill.

* * *

Charles L. McMahon, of Tulsa, accompanied by Mrs. McMahon, has returned from a trip to Florida and Washington, D. C.

* * *

R. S. Ellison, George H. Jaques and Fred E. Wood of the Midwest Refining Company have been visiting Great Falls, Mont.

* * *

Rush M. Blodgett was recently elected vice president of the George F. Getty Oil Company and appointed assistant general manager.

* * *

A. F. Winn, Glenn Condon and Mr. Jack of the Skelly Oil Company attended the aeronautical meeting at St. Louis last week.

* * *

Julius Hanson, of the Shell Petroleum Corporation, St. Louis, and formerly of Tulsa, was a visitor to the Mid-Continent last week.

* * *

Sheldon Clark, vice president of the Sinclair Oil Corporation, has been re-elected president of the Chicago Stadium Corporation.

* * *

Walter Miller, vice president of the Continental Oil Company, made a round trip by airplane between Ponca City and Tulsa last week.

* * *

T. H. Barton, president of the Lion Oil Refining Company, has returned to his headquarters at El Dorado, Ark., from a visit to New York.

* * *

Dr. C. K. Francis has been appointed, for the third consecutive year, chairman of the Prize Essay Committee of the American Chemical Society.

* * *

R. S. Knappen, assistant to the vice president of the Gypsy Oil Company, Tulsa, has been visiting in New York, Washington, and Pittsburgh, Pa., on business.

* * *

John McFadyen, of Casper, Wyo., superintendent of the western division for the Ohio Oil Company, has returned from a trip to New Mexico and California.

* * *

Harry W. Schuetz, field representative of the Colonial Manufacturing Company, Pittsburgh, Pa., is visiting the Mid-Continent fields and was in Tulsa last week.

* * *

H. H. Schwartz of Casper, Wyo., was in Lewiston, Mont., to attend the annual meeting of the Arro Oil & Refining Company of which he is chairman of the board of directors.

* * *

Charles B. Buerger, vice president of the Gulf Refining Company in charge of refinery operations, is spending several days at the company's plant in Port Arthur, Tex.

* * *

William Harvey has been made head of the land department, and Avery Alcorn, geologist of the West Texas-New Mexico division of the Wentz Oil Corporation at Midland, Tex.

* * *

Alden H. Baum, formerly of the Mackintosh Hemphill Company, Pittsburgh, Pa., has been appointed manager of oil refinery sales of the National Alloy Steel Company, Blawnox, Pa.

* * *

Martin T. Rathvon has returned to Casper, Wyo., from a trip to Oklahoma and Colorado where he inspected properties of the Argo Oil Company of which he is superintendent of operations.

* * *

S. H. Keoughan, formerly at the head of the Continental Oil Company, has opened offices in the Continental Building in Denver, Colo., and will become actively engaged in the oil business again.

* * *

W. E. Dunlap, manager of the production department of the Richfield Oil Company of California, has appointed M. W. Lake superintendent of the company's activities in the Midway-Sunset Field of Kern County.

* * *

Jack Steele, who recently resigned as supervisor of the United States Geological Survey in Casper, Wyo., was in Tulsa to meet W. L. Connelly for a conference before going on to New York where he will sail in April for West Africa to take charge of exploration work for the Sinclair interests.

Max B. Miller of New York made a tour of Mid-Continent lubricating plants last week.

* * *

George B. McComb, sales manager of the Barrett Company, New York, was a business visitor in Tulsa the past week.

* * *

H. C. Detrick, of the United Petroleum Company, and who has been associated at Wichita, Kans., in the oil business with Doctor Miller, is ill at Mineral Wells, Tex.

* * *

J. S. Dewar, vice president, Phillips Petroleum Company; H. A. Trower, general sales manager; R. C. Jopling, assistant sales manager; and H. E. Holm, Bartlesville independent oil producer, visited Wichita, Kans.

* * *

W. E. Wrather, consulting geologist of Dallas, Tex., gave an illustrated lecture on Africa before the Tulsa Geological Society on the evening of February 18 that was very interesting and appreciated by the large audience.

* * *

G. H. Van Senden, for the past 18 years affiliated with the Shell Oil Company of California in its refinery department, has been appointed to a newly created position of vice president in charge of manufacturing.

* * *

M. E. Young, formerly general manager of the New York Oil Company, has returned to Casper, Wyo., after an extended business trip including short stops at Chicago, New York, Boston, Philadelphia and Washington, D. C.

* * *

William Clump, district foreman of the Prairie Pipe Line Company, with headquarters in Tulsa, has been retired after 35 years of service. His district has been split up among the Tulsa, Pawhuska, Bartlesville, and Nowata districts.

* * *

F. C. Hamilton, valuation and rate expert, for Henry L. Doherty & Company, will be one of the principal speakers at the twelfth annual convention of the Oklahoma Utilities Association at Tulsa, March 11, 12 and 13.

* * *

D. W. Moffitt, vice president of the Mid-Continent Petroleum Corporation, Tulsa, who with Mrs. Moffitt, has been spending the winter in Miami, Fla., is reported much improved in health. He does not expect to return to Tulsa until around April 1.

* * *

R. S. Lord, president of the Hope Engineering Company, Mount Vernon, Ohio, presented a paper entitled "Some Aspects of High Pressure Natural Gas Transportation" before the February 17 meeting of the Western Society of Engineers in Chicago.

* * *

Tribute was paid to the memory of James K. Crawford by the Park Board of the city of Tulsa in the past week when the board officially named a new 17-acre park in the northwestern part of the city Crawford Park. Mr. Crawford, nationally known oil man, died February 6.

* * *

Harold R. Deal, advertising manager of the Associated Oil Company of California, and J. H. Lewis, assistant domestic sales manager, were hosts at the San Francisco Auto Show to a number of automobile editors of bay region newspapers and representatives of several oil journals.

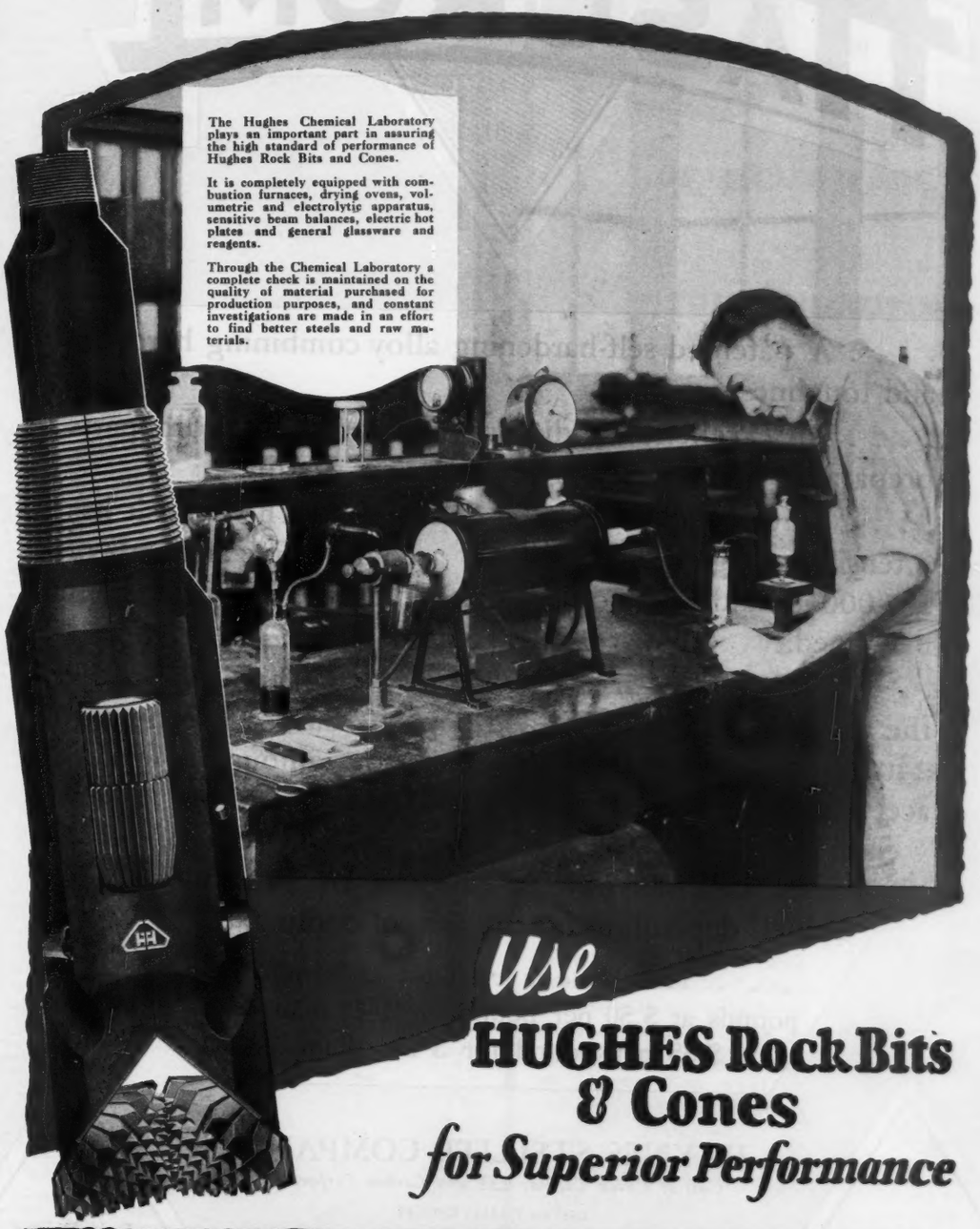
* * *

A. C. Hartley, head of the technical division of the Anglo-Persian Oil Company, Ltd., London, England, has spent several days in Tulsa and other Oklahoma points on a personal trip through the United States. He left for Houston and Gulf Coast fields on Thursday evening, and will return to London via New York City from there.

* * *

C. M. Copeland, superintendent of the Comar Oil Company's operations in the Tonkawa oil field of Oklahoma, has received from S. N. Blakeslee of Chicago, national safety petroleum representative, a telegram of congratulations upon learning that Copeland has made a million-hour record without lost time accident. He has received a similar wire from D. J. Wallace of Tulsa, director of the safety section of the Mid-Continent Oil and Gas Association. Wallace declares "one million hours without accident is an outstanding record in every sense of the word."

CHEMICAL LABORATORY



The Hughes Chemical Laboratory plays an important part in assuring the high standard of performance of Hughes Rock Bits and Cones.

It is completely equipped with combustion furnaces, drying ovens, volumetric and electrolytic apparatus, sensitive beam balances, electric hot plates and general glassware and reagents.

Through the Chemical Laboratory a complete check is maintained on the quality of material purchased for production purposes, and constant investigations are made in an effort to find better steels and raw materials.

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HUGHES Rock Bits & Cones

for Superior Performance

HUGHES TOOL COMPANY

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Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant
HOUSTON,
TEXAS

Export Offices
Woolworth Bldg.,
New York City

HASCROME

. . . . A patented self-hardening alloy combining hardness and toughness.

. . . . An excellent building-up rod for badly worn parts preparatory to hard facing with Haynes Stellite.

. . . . May be applied to steel or cast iron. The deposit has a tensile strength of 40,000 and a compressive strength of 177,000 pounds per square inch. It can be forged but not machined.

. . . . Its hardness varies with the method of application and the rate of cooling. Oxwelded deposits have a hardness of 240 to 500 Brinell depending upon the amount of excess acetylene in the flame and the rate of cooling. (Slow cooling makes it harder than quenching does.) Arc welded deposits have a hardness of 240 to 400 Brinell depending on the rate of cooling.

. . . . Hascrome is available in bundles of 50 pounds at $.50 per pound for 1/4" diam. rods or $.55 per pound for 3/16" diam. rods.

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HAYSTELLITE
HAYNES STELLITE

HAYNES STELLITE COMPANY
Unit of Union Carbide UCC and Carbon Corporation

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Cleveland—628 Keith Bldg.
Houston—6119 Harrisburg Blvd.
New York—30 East 42nd Street
Tulsa—Exchange National Bank Bldg.

General Offices—Kokomo, Indiana

Fair Prices
Quality Products
Dependable Supply
Engineering Service

HASCROME

OKLAHOMA GROSS PRODUCTION FOR FOURTH QUARTER

(Continued from Page 98)

Name and address—	Barrels	M. Feet	Amount
Gypsy Oil Co. (suspense account)	154,974.65	.....	234,479.41
Gypsy Oil Co. (suspense account)	.....	251,161	21,551.52
Gypsy Oil Co. for account of partners	9,334.49	.....	12,989.64
Gypsy Oil Co. for account of partners	1,368.18	.....	2,117.82
Gypsy Oil Co. (suspense)	.....	.....	181,167.00
Gypsy Oil Co.,* (suspense)	.....	.....	9,199.65
Green, J. D.,* Maud	.....	.....	4,867.56
Green, J. C.,* Maud	.....	.....	4,152.13
Green, Myrtle, and Myrtle Green, guardian, Oklahoma City	3,505.62	.....	5,017.75
Green, B. E.,* Shawnee	.....	.....	2,189.84
Green, Thelma Lee,* Duncan	.....	.....	5,403.84
Graham, Charles A., and Florence,* Montebello, Calif.	2,254.66	.....	3,493.23
Graham, Florence N., trustee,* Montebello, Calif.	4,453.97	.....	8,122.75
Graham, James H., Tulsa	5,489.93	.....	8,461.83
Gilmer Oil Co., Ardmore	34,778.71	.....	45,906.84
Glidden Oil Corp., Tulsa	5,952.11	.....	8,834.65
Glass, J. Wood.,* Nowata	4,929.87	.....	6,638.04
Glass and Harmon, Nowata	7,891.74	.....	10,249.06
Guaranty Trust Co. of New York,* New York City	.....	.....	24,291.69
Garland, R. F., & Co., Tulsa	7,151.45	.....	11,992.80
General Royalties Corp.,* Enid	.....	.....	4,472.94
Gorton Trust, The, Cement	7,777.19	.....	10,860.82
Galt-Brown Co., Ardmore	18,648.20	.....	29,317.23
Goddard Co.,* Ardmore	.....	.....	3,415.76
Gully, Phillip D.,* Oklahoma City	.....	.....	4,692.45
Getzelman, B. C.,* Algonquin, Ill.	.....	.....	4,078.60
Gelser, H. A.,* Fillmore, N. Y.	.....	.....	3,457.45
Gates Oil Co., Ardmore	9,384.72	.....	11,495.39
Gibson, John J., and Ernest W. McNeill, Toronto, Canada	.....	.....	3,889.01
Gladden, Clara T.,* Shawnee	.....	.....	8,653.99
Gilliam, Mrs. Annie,* Jonesboro, Ark.	.....	.....	7,794.76
Gilbreath, J. C.,* Shawnee	.....	.....	4,650.91
Gienney, Ethel,* Blackwell	.....	.....	2,423.19
Getzendaner, W. R., Waxahachie, Tex.	4,445.04	.....	5,893.76
Grayson, Rebecca,* Wewoka	.....	.....	2,469.11
Gardner Petroleum Co., Tulsa	15,286.54	.....	25,884.39
Gardner, J. S., Gdn. for Leona Gardner, Lovell	.....	.....	9,636.93
Gardner, J. S., Gdn. for Everett Gardner, Lovell	.....	.....	9,636.93
Gardner, J. S.,* Lovell	.....	.....	9,636.93
Greer, J. C., trus. Louise Strother Bunch, Martinsville, Va.	.....	.....	9,232.75
Goltry, U. L., trustee,* Enid	.....	.....	2,069.76
Grisso, W. E.,* Seminole	.....	.....	46,641.81
Grisso, W. E., Inc.,* Enid	.....	.....	3,323.65
Gilcrease Oil Co., Tulsa	44,354.49	.....	56,028.50
Grieves, John R., Terlton	7,859.16	.....	12,735.00
Grimes and Gillespie, Tulsa	10,495.28	.....	15,757.59
Gillespie, F. A., & Sons, Tulsa	16,538.53	.....	19,085.62
General Royalties, Inc.,* New York City	.....	.....	3,287.50
Gardner, Addie,* Enid	.....	.....	9,493.64
Gardner, Ina (Bixby),* Enid	.....	.....	9,493.64
Giblet, Dorothy May, Oklahoma City	.....	.....	2,015.63
Giblet, Frances Pauline, estate, Oklahoma City	.....	.....	2,015.63
Giblet, Clifford, Oklahoma City	.....	.....	2,015.63
Giblet, Walter, Oklahoma City	.....	.....	2,015.63
Graham, A. E.,* (paid by Superior Oil Co.,) Tulsa	.....	.....	9,334.34
Gragg, C. E.,* (paid by Superior Oil Co.), Tulsa	.....	.....	3,073.23
H			
Healdton Petroleum Co., Ardmore	.....	.....	17,077.72
Highway Oil Refining Corp., Tulsa	65,146.17	152,711	97,072.12
Houston Oil Co. of Houston, Tex.	83,898.74	83,180	137,660.33
Homaokla Oil Co., Oklahoma City	115,196.78	.....	152,955.01
Homaokla Oil Co.,* Oklahoma City	7,628.04	.....	9,487.73
Harold Petroleum Co., Blackwell	3,470.23	.....	6,428.45
Healdton Oil & Gas,* Enid	12,062.58	.....	19,504.93
Healdton Oil & Gas, Enid	18,274.14	.....	31,887.47
Home Royalty Co.,* Tulsa	1,326.25	.....	2,035.47
Home Gas Co. of Cushing, Okla.	20,918.68	.....	44,092.24
Harber, W. E.,* Seminole	.....	.....	11,884.10
Harber, R. T.,* Seminole	.....	.....	3,111.21
Harber, J. N.,* Seminole	.....	.....	3,224.60
Home Stake Oil & Gas Co., Tulsa	Oil	.....	127,293.49
Home Stake Oil & Gas Co., Tulsa	.....	Gas	7,578.28
Home Royalty Corp.,* Tulsa	.....	.....	18,704.25
Harris, V. V.,* Oklahoma City	.....	.....	18,961.33
Harris, Enoch M.,* Berwyn	.....	.....	2,181.35
Harris, E. L., Tulsa	.....	.....	8,488.34
Harris & Haun, Inc., Blackwell	.....	.....	16,829.77
Harris Hays Co.,* Okmulgee	.....	.....	9,878.65
Harris, E. L., trustee, Tulsa	7,259.00	.....	11,508.99
Harmon, Cora Ella,* Hennessey	.....	.....	5,228.56
Harmon, C. C.,* Nowata	.....	.....	2,859.56
Harmon, C. C., Nowata	11,408.90	.....	16,077.63
Harmon, Gertie,* Guthrie	.....	.....	5,266.86
Harland Oil Co., Walco	15,332.89	58,034	22,212.53
Hesco Oil Royalty Corp.,* New York City	.....	.....	4,396.24
Henderson Oil Co., Marietta, Ohio	7,101.45	.....	9,352.45
Hesslein, Max.,* New York City	.....	.....	2,252.05
Hammon, Jake L. and Edwin B. Cox,* Ardmore	.....	.....	13,897.37
Hammons, S. B.,* Seminole	.....	.....	2,044.97
Hambro Oil Co., St. Louis Mo.	3,991.57	.....	5,405.37
Halsell & Son, Oil & Gas, Vinita	2,901.16	26,144	5,218.78
Hiddleston, Weldon M.,* Oklahoma City	.....	.....	2,324.26
Hiddleston, Dale,* Oklahoma City	.....	.....	2,324.26
Hiddleston, Earle W., Oklahoma City	.....	.....	2,234.26
Hiddleston, Sarah S.,* Oklahoma City	.....	.....	2,324.26
Hall, Benjamin T.,* Los Cruces, N. Mex.	.....	.....	2,589.80
Hayner Royalty Corp.,* Tulsa	.....	.....	2,246.66
Hales, W. T., Oklahoma City	42,267.45	40,499	57,270.92
Hales, W. T.,* Oklahoma City	2,933.60	.....	4,400.61
Hill, P. J.,* Shawnee	.....	.....	2,023.49
Hightower, C. C.,* Los Angeles	.....	.....	3,058.35
Heise, Georgia and Edward,* Scranton, Kans.	.....	.....	3,870.00
Harrington, W. J., Coffeyville, Kans.	3,164.94	.....	5,033.46
Hardin, Martin,* Horton, Kans.	.....	.....	2,747.50
Hassman, E. A.,* Oklahoma City	.....	.....	2,416.82
Hernstadt, N.,* New York City	3,508.08	.....	4,890.35
Hassey, J. B., estate, Shreveport, La.	.....	.....	5,106.96
Hall, F. C.,* Chickasha	8,936.20	.....	14,258.30
Hayes, J. S.,* Newkirk	.....	.....	2,059.98
Higby, Gladys,* Tulsa	.....	.....	2,022.30
Hopkins, A. N.,* Davenport	1,018.27	2,740	2,056.40
Hilderbrandt, G. W.,* Oklahoma City	1,204.30	.....	2,010.88
Hudspeth, A. G.,* Lexington	.....	.....	4,023.99
Hatley, Mark G.,* Shawnee	.....	.....	2,154.31
Hatley, J. C., agent,* Garber	.....	.....	4,872.65
Haskell, Frank, agent, Tulsa	9,694.29	.....	12,654.05
Hyde, C. B.,* Oklahoma City	.....	.....	3,284.26
Hubbard, Robert A.,* Walpole, N. H.	.....	.....	2,069.02
Haun, Carl B.,* Blackwell	.....	.....	4,820.58
Hayes, S. W., Oklahoma City	83,515.24	.....	125,174.78
Henry, J. W., Tulsa	5,292.69	36,562	10,666.71
Hill Drilling & Devopment Co., Tulsa	8,810.46	.....	12,749.71
Hillitip Investment Co.,* St. Louis, Mo.	.....	.....	3,205.24
Higgins, Betty,* Tulsa	.....	.....	2,499.75
Higgins, J. R.,* Tulsa	2,445.44	.....	4,331.14
Hemlock Oil Co.,* Tulsa	10,418.94	.....	15,973.03

(Continued on next Page)

AN ACTUAL VIEW

OF A CUT MADE BY A

"TOLEDO" AUTOMATIC

"TOLEDO" Automatic pipe cutters are without doubt the finest on the market. Simple to operate — just a turn of the hand wheel and the knives are set to feed rapidly and evenly until the cut is completed.

And speed—the No. 40 when used with the "TOLEDO" Power Drive cuts off 4" pipe in 65 seconds, the No. 80 with the "TOLEDO" Power Drive cuts off 8" pipe in 90 seconds. You are always sure of the same result—a smooth square end cut without burr.

You will like the ease with which "TOLEDO" Automatics will cut your large pipe — either by hand or with the "TOLEDO" Power Drives. You will be amazed at the reduction in your pipe cutting costs. Certainly we will send you additional information. Just mail a post card.

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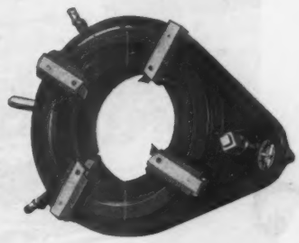
F.O.B. TOLEDO



"TOLEDO" NO. 80—CAP. 4½" TO 8"
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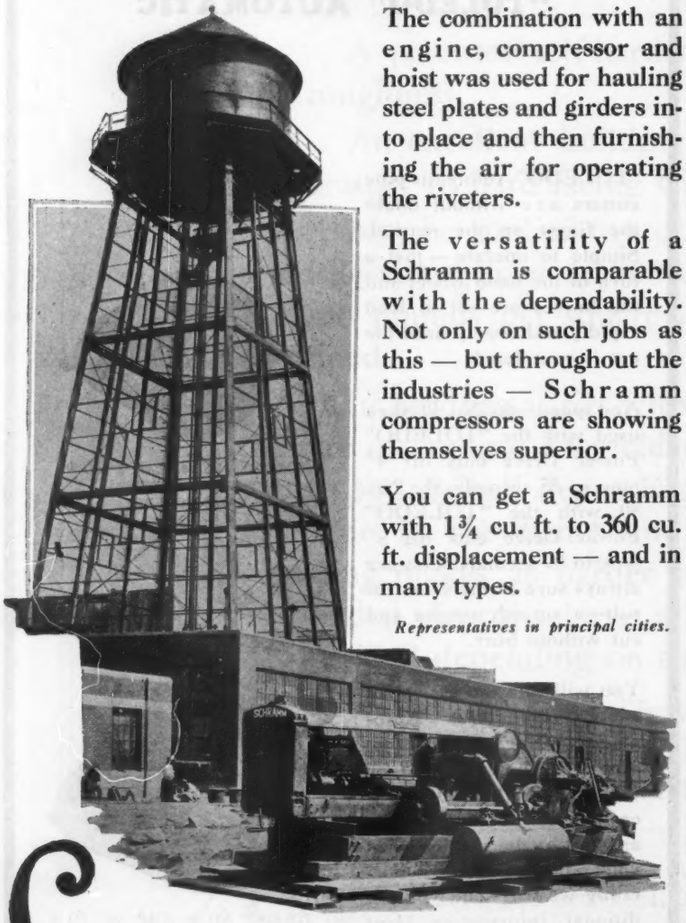
THE TOLEDO PIPE THREADING MACHINE CO.
TOLEDO, OHIO
NEW YORK OFFICE, 72 LAFAYETTE ST.

This kind of Job is an Everyday Job for a Schramm

THIS Schramm Compressor was employed in nearly every phase of erecting the 100,000 gallon tank at the new Ford plant at Chester, Pa.



The combination with an engine, compressor and hoist was used for hauling steel plates and girders into place and then furnishing the air for operating the riveters.

The versatility of a Schramm is comparable with the dependability. Not only on such jobs as this — but throughout the industries — Schramm compressors are showing themselves superior.

You can get a Schramm with 1¾ cu. ft. to 360 cu. ft. displacement — and in many types.

Representatives in principal cities.

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517 W. Archer St.
SAN FRANCISCO BRANCH
75 Freemont St.

Schramm Inc. West Chester, Penna., U. S. A.

Name and address—	Barrels	M. Feet	Amount
Horton, E. N.,* Ardmore	.....	.....	2,231.33
Horton, A. D., agent,* Hawarden, Iowa	3,757.55	.....	4,547.09
Hefney Co.,* Oklahoma City	.....	.....	4,636.84
Hudson, J. H., Ardmore	.....	.....	44,589.84
Hudson, Hargrove,* Tulsa	.....	.....	7,942.26
Howard, O. R., Tulsa	3,552.01	.....	5,059.35
Howell, Mollie E.,* Wellington, Kans.	.....	.....	2,155.45
Harwell, E. P., Tulsa	5,332.97	.....	5,480.29
Harrell, Ward,* Oklahoma City	.....	.....	2,393.03
Hull, J. A., Co., Tulsa	39,668.76	23,197	65,057.49
Hughes, T. J., Oil Corp., Cushing	.....	.....	9,790.41
Hay & McClure, Inc., Peoria, Ill.	9,670.19	.....	17,152.99
I			
Indian Territory Illuminating Co., Bartlesville	2,939,126.92	.....	3,230,567.86
Indian Territory Illuminating Co., Bartlesville	.....	3,245,244	270,899.08
Indian Territory Illuminating Co., Bartlesville	C. H. Gas	2,025,721	51,571.19
Indian Territory Illuminating Co.,* Bartlesville	121,907.85	.....	191,475.96
Indian Territory Illuminating Co.,* Bartlesville	.....	Gas	2,388.97
Indian Territory Illuminating Co.,* Bartlesville	.....	C. H. Gas	1,238.05
Indian Territory Illuminating Co. (suspense),* Bartlesville	.....	.....	5,687.34
Investors Royalty Co., Inc.,* Tulsa	68,830.36	.....	112,929.43
Imperial Royalties Co., by E. S. Horn, trustee, Kansas City, Mo.	.....	.....	230,210.77
Indian Royalty Co.,* Okmulgee	58,329.81	.....	89,525.65
Indiana Oil & Gas Co., Tulsa	24,335.01	.....	34,298.76
Indiana Oil & Gas Co., Tulsa	.....	16,836	3,096.81
Interocean Oil Co., Tulsa	35,649.89	.....	53,172.74
Independent Oil & Gas Co., Tulsa	993,439.52	.....	1,518,514.85
Independent Oil & Gas Co., Tulsa	.....	2,717,514	112,178.38
Independent Oil & Gas Co.,* Tulsa	.....	.....	15,156.52
Ingram Royalty Co.,* Shawnee	.....	.....	8,572.06
Ingram, H. L.,* Shawnee	.....	.....	6,181.90
Ingram, J. A.,* Shawnee	.....	.....	14,341.68
Iron Mountain Oil Co., Tulsa	31,459.46	22,968	47,835.92
Iron Mountain Oil Co.,* Tulsa	5,681.38	.....	10,377.42
Ireland, O. M., Sapulpa	4,861.95	6,568	7,048.96
Irwin, R. A., Tulsa	15,699.71	.....	23,574.68
Irwin, R. A., Tulsa	.....	4,199	158.93
Imo Oil & Gas Co., Covington	.....	.....	11,766.57
Ice, A. B., L. F. Ice and Ice Drilling Co., Tulsa	10,355.15	7,939	14,806.54
Ingram, Leonard D.,* Cleveland, Ohio	.....	.....	2,157.53
J			
Jennings, E. H., Brothers Co., Pittsburgh, Pa.	4,055.77	.....	5,829.88
Jennings, Randolph P.,* Beverly Hills, Calif.	.....	.....	23,441.90
Jennings, R. G., Pittsburgh, Pa.	6,042.82	.....	10,548.95
Jameson, John B.,* Concord, N. H.	24,089.95	.....	41,239.27
Joines, U. S.,* Ardmore	.....	.....	2,097.31
Junction Oil & Gas Co., Newkirk	.....	.....	6,805.16
Jones, Bernard B.,* Washington, D. C.	3,603.86	.....	6,089.88
Jones, J. Edward,* New York City	.....	.....	2,665.54
Jones, Calvin,* Oklahoma City	.....	.....	6,056.38
Jones, R. C., & Co., Inc., Cushing	.....	.....	5,607.34
Jones, Robert L.,* Bristow	1,715.18	31,160	5,515.94
Jones, Lola Belle,* Oklahoma City	.....	.....	2,324.26
Johnson, C. O., and George C. Pendleton, receivers,* Durant	.....	.....	6,828.16
Johnson, C. J.,* Oklahoma City	.....	.....	3,861.25
Johnson, James T. and Martha,* Sulphur	.....	.....	2,311.34
Johnson Oil & Refining Co., Chicago, Ill	10,956.89	.....	16,595.87
Johnson, B. F. and Mary, Fayetteville, Ark.	.....	.....	2,789.76
Johnston, Willard,* Shawnee	.....	.....	2,314.43
Jarvis-Zollinger and Andrews,* Shawnee	.....	.....	11,165.09
Jackson, L. B., Sapulpa	.....	.....	7,346.42
Jackson, Mrs. Pearl B.,* Sapulpa	1,480.69	.....	2,143.83
Jackson, L. B.,* Sapulpa	.....	.....	4,910.29
Jackson, L. B., Sapulpa	.....	.....	6,212.17
Jordan, C. E. V.,* Maud	.....	.....	13,883.53
K			
Kay Oil Co., Blackwell	27,824.14	.....	47,773.11
Kewanee Oil & Gas, Titusville, Pa.	209,818.04	.....	368,101.07
Kreola Oil Co., Ardmore	9,983.10	.....	7,497.13
Kreola-Colcord & Commerce, Ardmore	9,458.18	.....	12,119.31
Kingwood Oil Co., Okmulgee	46,753.55	10,948	77,807.57
King, Minnie,* Oklahoma City	.....	.....	2,398.91
King Royalty Co., Wichita Falls, Tex.	5,119.11	.....	7,132.48
King, J. T., Okmulgee	3,834.67	.....	6,197.04
Kiester Manning, Inc., Tulsa	6,259.12	.....	9,960.19
Knappenberger, Frank,* Phoenix, Ariz.	.....	.....	4,085.14
Knappenberger, D. L., Tulsa	3,502.20	.....	5,565.55
Klingensmith, C. D., Sapulpa	6,968.84	.....	9,488.98
Kennedy, S. P.,* Bradford, Pa.	1,353.84	.....	2,126.43
Kennedy, Emma B., trustee,* Okemah	.....	.....	3,518.23
Kolb, S. L.,* Duncan	.....	.....	2,241.66
Klein, Mrs. Nettie,* New York City	.....	.....	8,843.11
Kanner, Mack,* New York City	.....	.....	4,822.66
Kunderer, J. R.,* Oklahoma City	.....	.....	3,457.24
Kimmell, J. D.,* Tulsa	.....	.....	2,002.70
Krumme, J. W.,* Okemah	1,984.00	.....	2,945.48
Keck, I. and L.,* Nacona, Tex.	.....	.....	3,390.05
Knotts, Sarah T.,* Stillwater	3,418.22	.....	6,146.56
Krebs, Annie,* Duncan	.....	.....	3,287.67
Kelley, Albert,* Bristow	.....	.....	2,316.30
Kelley, Lee,* Norman	.....	.....	2,831.80
Kimble, C. C. and S. H.,* Beggs	.....	.....	5,280.09
Kisner, Minnie L.,* Enid	.....	.....	2,237.75
Kersaw, L. R.,* Muskogee	3,968.77	.....	6,267.64
Knox, Charles E., Enid	3,296.44	7,047	6,604.53
Kay County Gas Co., Ponca City	.....	1,009,420	101,504.26
Keener Oil & Gas Co., Tulsa	39,637.36	2,172	52,757.13
Kay & Kiowa Oil Co., Tulsa	5,737.00	.....	9,001.23
Kay & Kiowa Oil Co., Tulsa	.....	Gas	708.12
Kisner, R. R.,* Enid	.....	.....	2,237.75
King, Helen Walker,* Orange, Calif.	.....	.....	15,089.19
K. D. & H. Oil Co.,* Ada	3,287.94	.....	3,805.01
Keyokla Oil Co.,* Oklahoma City	.....	.....	2,294.49
King, Helen Walker, Gdn.,* Orange, Calif.	.....	.....	3,484.68
L			
Link Oil Co., Tulsa	17,359.78	.....	25,635.80
Link Oil Co., Tulsa	.....	Gas	500.38
Louisiana Oil Refining Co., Shreveport, La.	81,339.68	159,310	103,650.13
Leeper, J. D.,* Madill	2,554.01	.....	3,812.17
Lawton Corp., Oklahoma City	1,874.91	.....	3,847.65
Lawson Petroleum Co.,* Tulsa	4,476.08	.....	7,031.37
Little Nick Oil Co., Chickasha	.....	.....	28,275.43
Lenox Oil Co., Okmulgee	.....	.....	8,960.88
Lack, B. D.,* Oklahoma City	.....	.....	10,778.56
Lack, Matyse B.,* Oklahoma City	.....	.....	8,415.41
Lack, B. D., Co.,* Oklahoma City	.....	.....	5,555.44
Lillard, Mrs. J. C.,* Wewoka	.....	.....	8,172.72
Landon, A. M., Independence, Kans.	5,996.13	.....	8,700.35
Lohman, Mrs. S. E.,* Altus	.....	.....	5,596.22
Lohman, John,* Altus	.....	.....	2,910.18
Laster, T. F.,* Shawnee	.....	.....	5,152.08
Love, Mrs. Frank., trustee for Ralph W. Johnston,* Denison, Tex.	.....	.....	2,579.21
Longmire, W. M.,* Oklahoma City	.....	.....	4,499.24
Lindley, E. D.,* Alex	.....	.....	3,166.31
Ludey, Patty Spence, paid by Gypsy Oil Co.	4,146.24	.....	5,551.05
Laurel Oil & Gas, paid by Gypsy Oil Co.	51,160.37	.....	106,057.57
Laurel Oil & Gas, paid by Gypsy Oil Co.	6,599.83	.....	12,679.19

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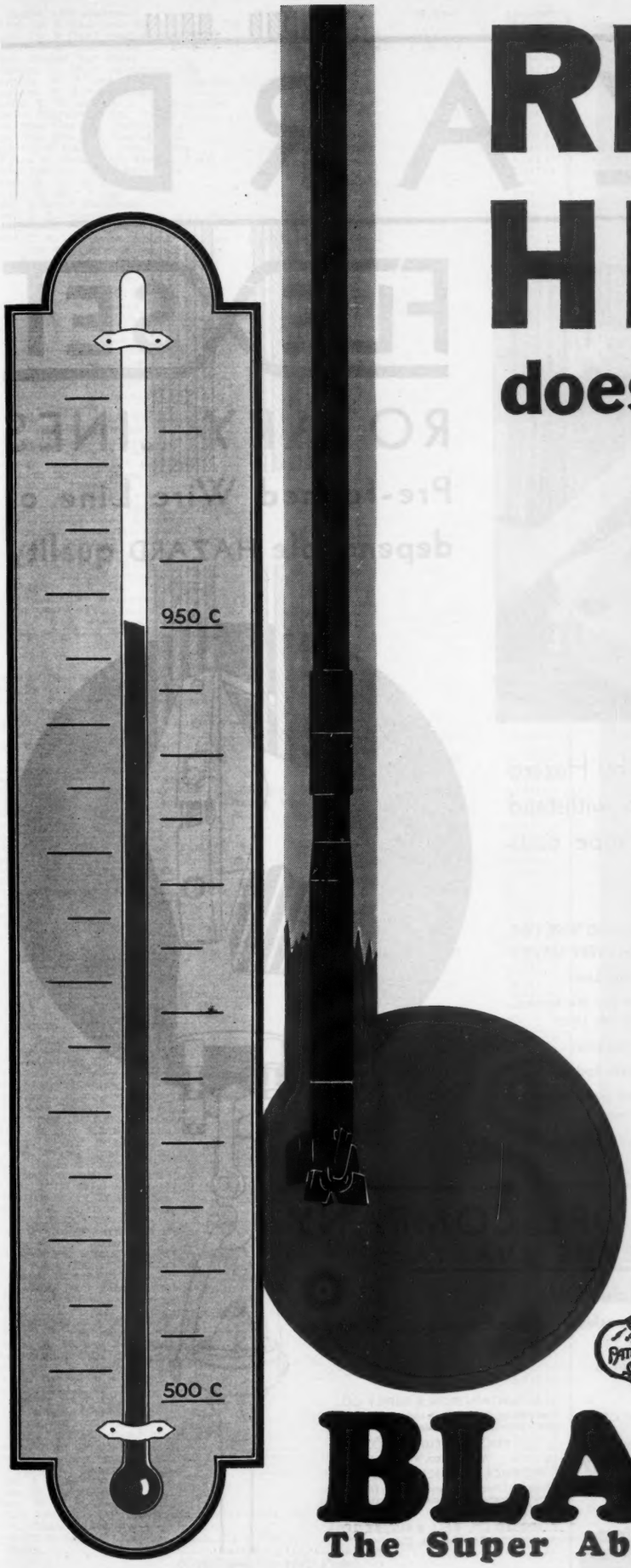

RED HEAT

does not lessen the Abrasion-Resistance of BLACKOR

INSTEAD of becoming brittle and less abrasion resistant if the bit gets red hot from stoppage of circulation, Blackor is as abrasion resistant at "red heat" as it is under normal conditions and drilling can be continued without pulling out of hole to change bits.

Blackor is applied in two or more layers and has the same effect on the bit as that obtained by tempering. It produces a diamond-like hardness at the cutting edge and a "softer" hardness underneath that stiffens the steel of the tool and prevents bending, which might chip off the facing. Because Blackor makes a perfect bond with the steel of the bit, it does not crumble away and leave the bit exposed to abrasive attack.

Any competent welder equipped with the carbon electric arc can easily apply Blackor... usually at the rate of 100 square inches per hour. One ounce of Blackor will cover from 4 to 6 square inches, one layer.

If you want more hole with fewer changes of bits, use Blackor!

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1,613,942 1,424,536
359,925 30,021
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2,580 1,069
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Blackor is packed in convenient 5-lb. containers. Complete working instructions are furnished. Being granular in form, loss by dusting is negligible.

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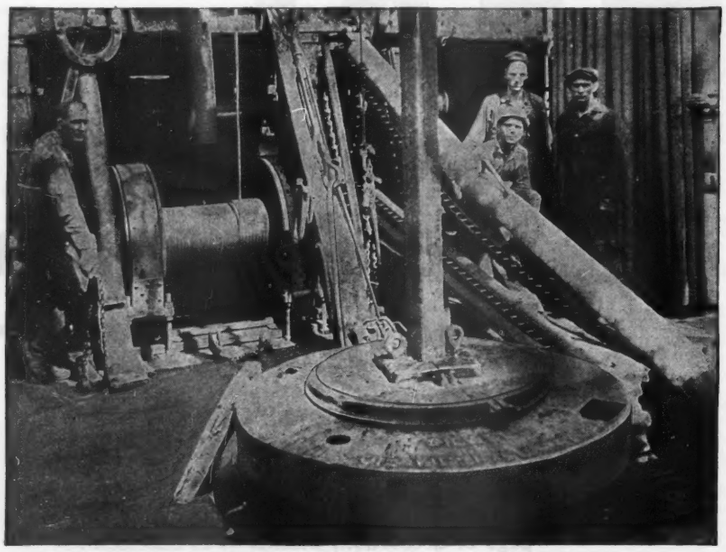
HAZARD



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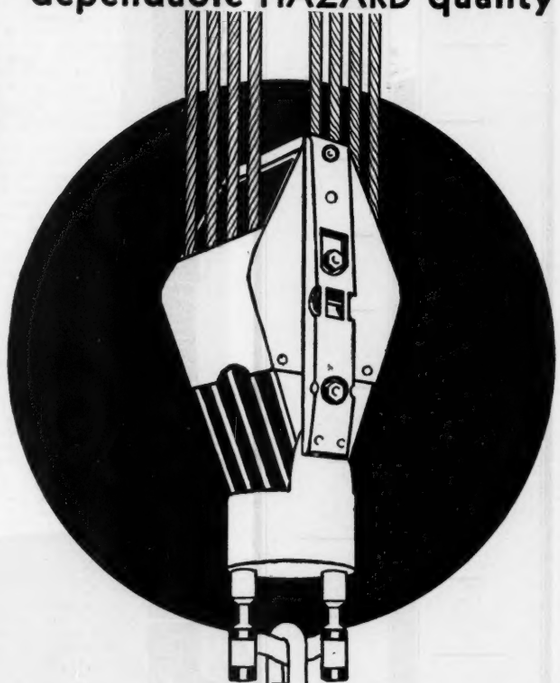
Pre-formed Wire Line of dependable HAZARD quality



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- Sand and Mandrel Lines
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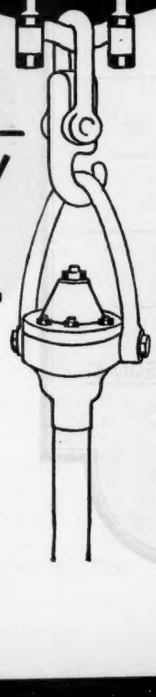

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Cameron, W. Va.

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Weston, W. Va.

FORT WORTH WELL MACHINERY & SUPPLY CO.
Fort Worth, Texas.

GREAT NORTHERN TOOL & SUPPLY CO.
Billings, Mont.
Cody, Kemmerer, Wyoming; Kevin, Montana.

HOUSTON OIL FIELD MATERIAL CO., Inc.
Houston, Texas

LONGHART SUPPLY CO.
619 Petroleum Bldg., Fort Worth, Texas
Big Springs, Graham, McCamey, McLean, Pampa, Pyote, Ranger, Rankin, Santa Rita, Texas.

MID-CONTINENT SUPPLY CO.
Fort Worth, Texas.

MOUNTAIN IRON & SUPPLY CO.
Parkersburg, W. Va.; El Dorado, Eureka, Madison, Valley Center, Wichita, Kansas.

PRICHARD SUPPLY CO.
Mannington, W. Va.

PRODUCERS SUPPLY & TOOL CO.
Marietta, Ohio; St. Mary's, W. Va.; Fort Worth, Olney, Graham, Coleman, Muenster, Texas; Bristow, Oklahoma.

UNITED OIL WELL & SUPPLY CO.
Los Angeles, Cal.

Name and address—	Barrels	M. Feet	Amount
Laurel Oil & Gas, paid by Gypsy Oil Co.	.....	.....	18,512.27
Laurel Oil & Gas,* paid by Gypsy Oil Co.	1,798.19	.....	3,537.95
Laurel Oil & Gas, Tulsa	58,540.96	89.863	91,949.13
Lamb, Homer T.,* Tulsa	.....	.....	41,796.84
Laughlin, R. W.,* Oklahoma City	.....	.....	4,161.42
Laughlin, W. T. and Lyles,* Oklahoma City	.....	.....	4,125.30
Laughlin, N. J.,* Cushing	.....	.....	2,170.35
Laselle, T. E. and B. A. Laselle, Ada	14,241.46	.....	21,499.16
LaSalle Petroleum Co., Tulsa	2,166.32	9,682	3,888.37
Lone Star Gas Co., Dallas, Tex.	6,693.43	.....	7,332.14
Lone Star Gas Co., Dallas, Tex.	.....	48,852	3,837.01
Lima Oil & Gas Co., Bartlesville	.....	.....	44,543.49
LaForce & Ferguson,* Limon, Colo.	.....	.....	4,484.37
Lilami Oil Co., Oklahoma City	.....	.....	7,737.55
Lebow, C. H., Tulsa	5,011.80	.....	8,690.22
Lebow, C. H.,* Tulsa	1,393.72	.....	2,101.42
Lytal, Henry,* Oklahoma City	.....	.....	2,473.24
Lubell, S. L., trustee for O. G. & O. Properties, Tulsa	3,791.69	.....	5,150.43
Lewis, Wade,* Harlan, Iowa	1,800.16	.....	3,201.89
Lewis, C. E. and D. M. Rhodes, trustee, Chicago, Ill.	1,730.72	.....	2,904.81
Lash and McCall, et al, Nacona, Tex.	10,315.94	.....	8,768.55
Lone Eagle Oil & Gas Co., Duncan	15,488.12	.....	27,893.12
Mc			
McMahan, R. M., trustee, Tulsa	3,634.61	.....	7,080.72
McMahon, C. L., Inc. and C. L. McMahon, Tulsa	59,962.56	.....	95,605.99
McMahon, C. L. and C. L. McMahon, Inc.,* Tulsa	9,901.30	.....	16,562.49
McMahon, C. L., Tulsa	3,834.66	.....	6,197.05
McMan Oil & Gas, Tulsa	78,152.08	.....	123,307.72
McCulloch Oil Co., Tulsa	90,190.67	.....	150,066.44
McKee, S. H.,* Tonkawa	.....	.....	8,845.00
McGee, R. L.,* Shawnee	.....	.....	17,147.58
McGee, Jodie,* Norman	.....	.....	3,269.41
McGee, J.,* Asher	.....	.....	6,411.73
McBride, W. C., Inc.,* St. Louis, Mo.	.....	.....	15,767.01
McCulloch Oil Co., Tulsa	110,673.82	.....	183,518.86
McGinley Sigler Co., Fort Worth, Tex.	7,705.39	.....	6,549.58
McCaughtry, Floyd,* Chickasha	.....	.....	3,386.65
McCully, Charles, Jr.,* Guthrie	.....	.....	4,557.38
McDaniel, W. F.,* Blackwell	.....	.....	3,283.00
McGraw Oil Co., Tulsa	25,563.96	.....	38,663.66
McRoberts Royalty Co.,* Tulsa	.....	.....	2,773.28
McCully, Charles and Emma, Hennessey	.....	.....	13,736.30
McClure & Hay, Inc., Hennessey	9,670.19	.....	17,152.99
McCully, Bevel O.,* Hennessey	.....	.....	3,861.83
McCroskey, Edgar L., and Carrie F.,* Asher	.....	.....	30,180.35
McAlester, Mary B.,* McAlester	.....	.....	6,409.64
McClure, Carrie L.,* McAlester	.....	.....	6,409.64
McGill, W. H., administrator, estate of E. Davis, Ardmore	16,911.16	.....	22,094.35
McCully, Ell B., Hennessey	.....	.....	6,087.34
McKim, Mary, Oklahoma City	.....	.....	2,398.51
McQueen, I. R., Oklahoma City	5,376.10	.....	8,843.08
MacDonough, J. M.,* New York, N. Y.	.....	.....	2,167.57
M			
Magnolia Petroleum Co., Dallas Tex.	3,305,821.74	.....	4,815,839.49
Magnolia Petroleum Co., Dallas, Tex.	.....	Gas	264,429.70
Magnolia Petroleum Co., (paid under protest) Dallas, Tex.	41,743.33	.....	68,005.02
Magnolia Petroleum Co., (paid under protest) Dallas, Tex.	.....	52,833	5,513.91
Magnolia Petroleum Co., (paid under protest) Dallas, Tex.	2,812.71	6,062	5,214.34
Magnolia Petroleum Co.,* Dallas, Tex.	33,894.38	.....	56,904.36
Magnolia Petroleum Co.,* Dallas, Tex.	.....	Gas	2,773.07
Magnolia Petroleum Co., (suspense), Dallas, Tex.	.....	.....	12,901.00
Magnolia Petroleum Co.,* (suspense), Dallas, Tex.	.....	.....	29,415.55
Margay Oil Corp.,* Tulsa	1,689.74	.....	2,936.15
Margay Oil Corp., Tulsa	71,319.04	.....	112,207.03
Major Oil Co.,* Okmulgee	.....	.....	3,628.70
Midland Royalty Corp.,* New York, N. Y.	.....	.....	109,074.00
Minnehoma Oil & Gas, Tulsa	274,750.74	.....	446,990.65
Minnehoma Oil & Gas, Tulsa	.....	882,427	28,055.15
Mulberry Oil Co., Cushing	.....	.....	83,761.00
Mid-Kansas Oil & Gas Co., Findlay, Ohio	610,697.99	.....	940,946.53
Mid-Kansas Oil & Gas Co., Findlay, Ohio	.....	615,553	20,634.71
Marileen Oil & Gas, Blackwell	6,791.52	.....	11,171.76
Malernee Oil Co., Oklahoma City	4,838.68	.....	8,042.68
Mid-Continent Petroleum Corp., Tulsa	1,417,436.83	.....	2,165,706.48
Mid-Continent Petroleum Corp., Tulsa	.....	Gas	113,932.31
Mid-Continent Petroleum Corp.,* Tulsa	7,101.74	.....	8,364.44
Midco Oil Corp., Tulsa	12,212.39	2,702	18,783.56
Marquette Oil Co., Tulsa	10,781.99	149,638	29,153.81
Mammoth Royalty Corp.,* Oklahoma City	3,231.22	.....	4,899.50
Monarch Royalty Corp.,* Kansas City, Mo.	.....	.....	94,789.30
Meridian Gas Co., Dallas, Tex.	.....	521,796	42,112.70
Meadors, Frank, Jr., Wetumka	5,474.69	.....	8,628.61
Morton & Co., Tulsa	1,577.40	Gas	5,733.79
Mudge Oil Co., Pittsburgh, Pa.	17,465.72	.....	13,397.37
Markham, J. H., Jr., Tulsa	19,317.74	.....	28,677.00
Markham, J. H. Jr.,* Tulsa	1,194.20	.....	2,076.62
Madden and Madden, Tulsa	7,479.39	.....	11,496.76
Mullendore, E. C., Trust Co., Cleveland	.....	.....	35,642.96
Mullendore Trust Co.,* Cleveland	.....	.....	4,538.34
Miller Bros. 101 Ranch, Marland	.....	.....	5,433.75
Melton, C. H.,* Wichita Falls, Tex.	3,607.79	.....	5,683.96
Merkley, E. A.,* Tulsa	25,035.00	.....	37,366.40
Maguire, Frank,* Newark, N. J.	.....	.....	2,253.31
Milner, Jonas B.,* Allen	.....	.....	5,480.28
Mussellem, Sophie S.,* Muskogee	3,619.12	.....	6,436.01
Merrick, F. W., and R. W. Coe, Ardmore	10,443.39	.....	13,670.61
Merrell, Robert,* Slaton, Tex.	.....	.....	3,953.98
Mainard, M. F., Jr.,* Wewoka	.....	.....	2,006.40
Mainard, J. L.,* Wewoka	.....	.....	2,070.48
Miller, Frank W., trustee,* Newark, N. J.	.....	.....	4,792.32
Mathis, M. P.,* Shawnee	.....	.....	8,246.09
Melton, Alice, administratrix,* Duncan	.....	.....	2,738.32
Myers, Alice Clark,* Santa Fe, N. Mex.	.....	.....	3,388.44
Maines, J. W.,* Ada	.....	.....	2,506.63
Miner, John N.,* Jackson, Mich.	1,804.52	.....	2,860.32
Million and Thomas,* McAlester	3,651.68	.....	4,788.66
Metcalf, R. J.,* Fort Worth, Tex.	.....	.....	2,806.90
Massengill, R. E.,* Shawnee	.....	.....	3,985.01
Maxey, J. H.,* Oklahoma City	.....	.....	3,172.83
Morgan, M. B., and Joe Paul, trustee, Muskogee	.....	.....	4,924.81
Morgan, Dudley D., Tulsa	.....	.....	5,747.87
Mayes, E. L.,* Tulsa	.....	.....	36,630.90
Mayhue, George M.,* Ada	.....	.....	9,717.08
Mayhue, G. C.,* Ada	.....	.....	4,009.93
Mayhue, W. E.,* Ada	.....	.....	4,132.18
Meyer, Annie,* Sapulpa	.....	.....	2,961.43
Martin, R. W., Duncan	.....	.....	4,268.55
Merkle, J. H., guardian,* Tecumseh	.....	.....	2,480.59
Monson, Emma,* Oklahoma City	.....	.....	3,861.25
Misener, F. D., Tulsa	7,448.44	.....	9,701.22
Moore, Sy and Lucy,* Guthrie	.....	.....	2,306.13
Moore, J. Read,* Wewoka	.....	.....	8,529.46
Mason, D. B., Tulsa	19,745.31	.....	24,859.17
Mason, W. G.,* Chelsea	.....	.....	42,774.82
Murphy Oil Co. of Pennsylvania, Philadelphia, Pa.	8,883.47	.....	11,950.17
Moore, Clint, estate, Tulsa	13,812.55	.....	21,971.33
Maud Oil & Gas Co., paid by Prairie Oil & Gas Co., Tulsa	9,213.54	.....	15,177.25

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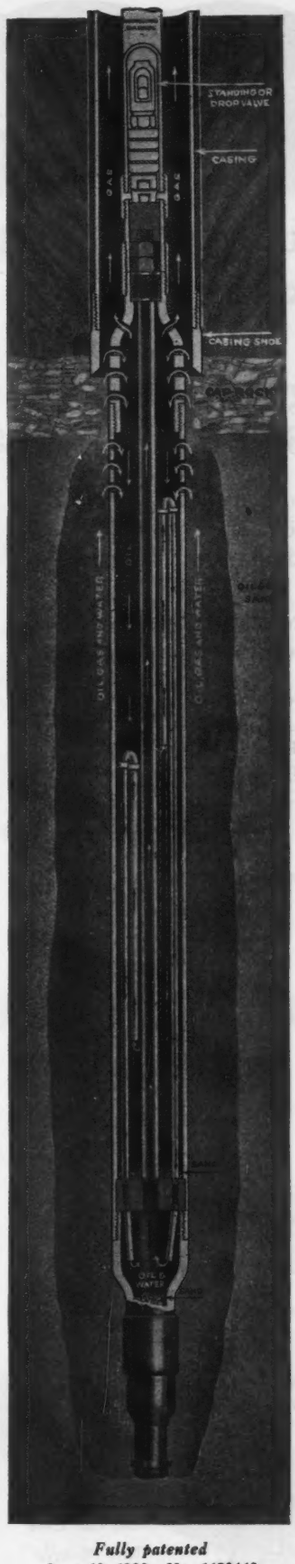


Fully patented
June 12, 1928—No. 1673663
Oct. 22, 1929—No. 173249

A *Miller Product*

THE **Chancellor Separator**

A POSITIVE GAS ANCHOR
CUT OIL PREVENTER
A DOUBLE SANDTRAP

The Chancellor Separator is designed to separate the Gas and Water from the oil at the bottom of the well. Used below the working barrel at the bottom of the hole, it prevents gas troubles, because it is a positive gas anchor. Completely stops the pumping of gas.

Prevents Cut Oil, by keeping the gas out of the tubing, and pumping the water separate from the oil by use of the siphon tubes. First a head of water then a head of oil is pumped through the tubing, keeping worn barrel, cut cups, and valves from emulsifying oil and water. This eliminates the treating of oil and increases the casinghead gas.

There are no working parts to wear out. Closed on top, cavings cannot clog the Separator, absolutely guaranteed in every way—*it will pay for itself before you are invoiced.* This is the result of years of experimenting. Now being used by most of the larger Oil Companies.

Manufactured in lengths of 8 feet to 16 feet, with an outside diameter of 4¼″. Special sizes are made to order. We welcome your inquiries. Send for fully descriptive folder giving full details of this remarkable new member of the Miller family.

MILLER
Combination Bailer & Pump Co.

General Offices and Plant
SAPULPA, OKLAHOMA, U. S. A.

Born and Brought Up with "Performance" as the Leading Quality, **WALL** Still Clings to its Precedent of 1830

WALL's reputation, earned in a century of effort, must be jealously guarded. Every foot of Wall Walk-Laid Rope is a custodian of our tradition—"Dependability".

That's why Wall Products are carried by these leading supply houses and distributors in the oil industry:

MID-CONTINENT FIELDS

Mid-Continent Headquarters

215A East Archer St., Tulsa, Oklahoma.

ATLAS SUPPLY CO.
Muskogee, Oklahoma.
Stock Points—Oklahoma: Muskogee, Seminole, Ada, Blackwell, Earlsboro, Maud. Texas: Fort Worth, McCamey, Pyote, Pampa, Vernon, Wink.

THE BOVAIRD SUPPLY CO.
Tulsa, Oklahoma.
Stock Points—Kansas: Independence, McPherson, Wichita Heights. Oklahoma: Seminole, Sapulpa, Maud, Beggs. Texas: Borger.

THE BRIDGEPORT MACHINE CO.
Wichita, Kansas.
Stock Points—Oklahoma: Maud, Seminole, Oklahoma City, Marshall. Texas: Breckenridge, Pampa, Ranger. Kansas: Winfield, Wichita, Russell, McPherson. New Mexico: Hobbs.

WESTERN DRILLING TOOL & SUPPLY CO.
Chanute, Kansas.
Stock Point—Kansas: Chanute.

HINDERLITER TOOL CO.
Tulsa, Oklahoma.
Stock Points — Texas: Big Spring, Eastland, Odessa, Pampa. Kansas: Wichita, Winfield. Oklahoma: Blackwell, Bristow, Tulsa, Okemah.

REPUBLIC SUPPLY CO.
Houston, Texas.
Stock Points—Texas: Houston, Borger, Breckenridge, Big Spring, Electra, Pyote, Pampa, Bryson. Oklahoma: Bristow, Maud, Oklahoma City, Seminole, Tulsa, Wewoka. Yale, Duncan, Wilson. Kansas: Wichita Heights.

WAGNER SUPPLY CO.
Fort Worth, Texas.
Stock Points—Texas: Breckenridge, Forsans, Iraan, Odessa, Wink, Fort Worth.

WESTERN SUPPLY CO.
Tulsa, Oklahoma.
Stock Points — Texas: Borger, Pampa. Oklahoma: Oklahoma City, Seminole, Tulsa.

EASTERN FIELD

NEW MARTINSVILLE SUPPLY CO.
New Martinsville, West Virginia.
Stock Points — West Virginia: New Martinsville. Pennsylvania: Waynesburg.

ROPE AND CORDAGE CO.
Parkersburg, West Virginia.
Stock Points — West Virginia: Parkersburg. Pennsylvania: Bradford. New York: Richburg.

BOVAIRD & CO.
Bradford, Pa.
Stock Point — Pennsylvania: Bradford.

WALL ROPE WORKS, INC.

48 South Street
New York, N.Y.

Factory:
Beverly, N.J.

Wall Cable
Wall Walk-Laid
Bull Ropes

Wall Cat Line
Wall Manila
Rope plain laid

Name and address—	Barrels	M. Feet	Amount
N			
National Union Oil & Gas Co., Blackwell	4,886.14	.....	8,432.20
New York Petroleum Royalty Corp.,* New York, N. Y.	2,311.54	.....	3,809.70
New York Royalty Corp.,* New York, N. Y.	5,571.69	.....	9,603.35
New England Oil & Pipe Line Co., Boston, Mass.	5,535.56	.....	8,770.86
National Oil & Development Co., Tulsa	9,569.09	.....	12,339.30
National Refining Co., Cleveland, Ohio	3,930.18	.....	7,790.32
Norwood Oil Co., Tulsa	7,286.11	.....	9,656.19
Neal, Justina,* Maysville	.....	.....	4,641.20
Nichols, G. A.,* Oklahoma City	.....	.....	16,210.62
Nichols, John B., Chickasha	.....	.....	6,718.25
Nichlos, Marjorie C.,* Chickasha	.....	.....	2,162.71
Nichlos, Marjorie C., Chickasha	.....	.....	6,711.06
Nowata Oil & Refining Co., Tulsa	.....	.....	9,479.06
Nadel, I., Tulsa	.....	.....	6,957.78
Noble Olson Drilling Co., Tulsa	7,388.82	.....	10,653.74
Noble, Margaret Vivian,* Ardmore	.....	.....	23,410.88
Noble, Harrett E.,* Ardmore	2,488.72	.....	3,227.04
Noble, Eva E.,* Ardmore	3,318.31	.....	4,437.07
Newstadt, Walter, Ardmore	.....	.....	6,583.59
Nelton, J. A.,* Shawnee	.....	.....	4,822.43
Norvell, A. S.,* Wewoka	.....	.....	9,794.38
Nelson, Howard D.,* Oklahoma City	1,705.74	.....	2,687.54
Nelson, F. M., New York City	3,699.57	.....	5,005.90
Neal, Beulah, and John A. Neal,* Wanette	.....	.....	2,842.88
North, R. B.,* Blackwell	.....	.....	3,337.10
Nelson, R. L.,* Webb City, Mo.	.....	.....	3,088.92
Noe, P. D., and Frank R. Noe,* Seminole	.....	.....	10,878.56
Norris, W. C., Tulsa	.....	.....	11,383.36
Neel, A. C., and G. C. Poplin,* Tecumseh	.....	.....	6,406.68
O			
Oklahoma Power & Water Co., Sand Springs	.....	150,054	15,005.40
Oklahoma Gas Utilities Co., Chickasha	.....	.....	59,042.15
Oklahoma Natural Gas Corp., Tulsa	.....	704,669	70,130.90
Oklahoma Natural Gas Corp. (suspense), Tulsa	.....	.....	2,304.00
Oil Producing Royalties, Inc.,* Elizabeth, N. J.	.....	.....	5,698.34
Osage Gas Producing Co., Independence, Kans.	380.66	359,434	32,866.62
Oklahoma Public Service Corp., Cedar Rapids, Iowa	7,176.12	.....	10,127.71
Omega Oil Corp.,* Chicago, Ill.	.....	.....	2,202.05
Ohio-Osage Oil Co., Tulsa	5,623.89	.....	9,845.01
Ohio Fuel Supply Co.,* Columbus, Ohio	18,251.48	.....	27,977.92
Ohio Fuel Supply Co., Columbus, Ohio	.....	Gas	1,779.05
Olean Petroleum Co., Bristow	1,951.86	114,223	13,542.06
Orit Securities Corp., New York City	.....	.....	2,650.21
Ona Oil Co., Blackwell	.....	.....	29,740.23
Orwig, S. S.,* Wewoka	.....	.....	11,489.12
Orwig, S. S., Wewoka (pa'd by Superior Oil Co.)	.....	.....	5,736.70
Obins, W. G., and H. C. Weber, Bartlesville	4,202.15	.....	5,303.38
Osborn, W. B.,* Ada	.....	.....	8,832.78
Owens, O. O.,* Tulsa	.....	.....	24,759.97
Owens, O. O., Tulsa	.....	.....	4,409.00
Owens, Josie,* Seminole	.....	.....	3,365.30
O'Rourke Oil Co., Bristow	.....	.....	10,703.88
Oliphant, A. H., Tulsa	8,395.03	.....	9,508.73
P			
Prairie Oil & Gas Co., Independence, Kans.; paid on T. B. Slick lease, Oklahoma County (suspense account)	.....	.....	553,387.33
Prairie Oil & Gas Co., Independence, Kans.	3,689,594.72	.....	5,863,503.75
Prairie Oil & Gas Co., Independence, Kans.	.....	547,660	35,767.15
Prairie Oil & Gas Co., Independence, Kans.	C. H. Gas	4,979,118	361,371.36
Prairie Oil & Gas Co., trustee, Independence, Kans.	2,689.43	.....	3,709.12
Prairie Oil & Gas Co., Independence, Kans., for Maud Oil & Gas Co.	9,213.54	.....	15,177.25
Producers Royalty Corp. (Nevada),* Tulsa	.....	.....	3,633.07
Producers Royalty Corp. (Delaware),* Tulsa	.....	.....	2,335.35
Producers Oil Co., Tulsa	13,340.98	.....	21,639.51
Producers & Refiners Corp., Tulsa	301,637.88	.....	239,294.03
Producers & Refiners Corp., Tulsa	.....	544,726	25,068.76
Petroleum Rights Corp.,* New York City	.....	.....	13,152.85
Petroleum Producers Co., Wichita Falls, Tex.	4,850.69	.....	7,489.81
Petroleum Royalties Co., Tulsa	.....	.....	126,536.00
Petroleum Royalty Corp.,* Tulsa	22,330.12	.....	35,721.77
Petroleum Co., The, Tulsa	4,256.12	.....	6,309.97
Petroleum Co., The, and M. H. Mosier, Tulsa	10,081.67	12,224	14,878.07
Pure Oil Co., Chicago, Ill.	1,564,004.27	.....	2,474,349.73
Pure Oil Co., Chicago, Ill.	.....	966,417	63,198.25
Pure Oil Co., Chicago, Ill.	Gasoline	380,765	34,089.40
Pure Oil Co. (suspense),* Chicago, Ill.	.....	.....	1,370.56
Pure Oil Co. (suspense),* Chicago, Ill.	.....	.....	19,898.89
Pierce, R. H., & Co., Inc.,* Tulsa	.....	.....	3,892.95
Pierce Petroleum Corp., Sand Springs	43,022.29	.....	72,401.93
Peerless Oil Production Co., Tulsa	8,803.42	.....	16,907.07
Plymouth Petroleum Co. et al, Tulsa	8,388.42	.....	12,076.94
Pioneer Petroleum Corp., Tulsa	12,473.91	.....	16,231.99
Paraffine Oil Co., Houston, Tex.	7,097.27	.....	9,846.44
Paragon Oil Co., Tulsa	4,193.19	2,302	6,548.70
Pawhuska Oil & Gas Co., Bartlesville	.....	41,074	6,079.68
Phillips Oil Co., Chelsea	4,109.66	.....	5,591.26
Phillips & Milam, Chelsea	38,082.76	.....	52,040.75
Phillips Petroleum Co., Bartlesville	533,088.60	.....	806,430.01
Phillips Petroleum Co., Bartlesville	.....	Gas	99,824.99
Phillips, Waite,* Tulsa	1,601.38	.....	2,753.96
Pyramid Oil Co., Winchester, Ky.	5,635.84	.....	7,392.37
Papoose Oil Co., Tulsa	93,149.25	279,549	157,916.10
Peerless Oil & Gas Co.,* Indiana, Pa.	8,474.23	.....	14,256.25
Phoenix Oil Co., Pittsburgh, Pa.	.....	.....	31,085.71
Plains Petroleum Co., Tulsa	8,563.44	9,177	14,229.97
Panther Oil & Gas Co., Oklahoma City	4,006.86	.....	6,648.94
Privette Drilling Co., Maramex	2,465.45	83,203	9,535.33
Provident Royalties Corp.,* Tulsa	8,309.64	.....	13,479.95
Provident Royalties Corp.,* Tulsa	.....	.....	2,271.00
Pearl Royalty Co.,* Tulsa	.....	.....	8,354.47
Pittsburgh Royalty Syndicate,* Pittsburgh, Pa.	1,175.19	1,371	2,200.86
Pawnee Oil Producing Co., Tulsa	3,999.03	.....	6,501.66
Pharoah, O. J.,* Henryetta	.....	.....	8,995.96
Parker, Holman,* Tulsa	.....	.....	2,030.32
Penn-Ohio Gas Co., Pittsburgh, Pa.	21,387.25	.....	31,660.37
Perkins & Cullum,* Wichita Falls, Tex.	1,462.94	.....	2,016.22
Perkins & Cullum, Wichita Falls, Tex.	18,794.59	.....	25,246.40
Putman, P. W.,* San Antonio, Tex.	2,396.92	.....	3,650.99
Peddycoart, R. O.,* County Line, Okla.	.....	.....	3,821.70
Pope, A. W. J.,* Brooklyn, N. Y.	.....	.....	2,580.38
Pace, George L., Wichita Falls, Tex.	40,609.78	.....	55,866.74
Priboth, F. F., Blackwell	1,852.57	.....	3,309.63
Priboth, Lillie M.,* Blackwell	1,867.10	.....	3,334.26
Potts, Mabel Dale and J. R. Potts,* Yale	.....	.....	5,938.80
Page, Charles, trustee, Tulsa	3,198.48	.....	5,201.61
Poplin, A. N., Nell and G. C.,* Tecumseh	.....	.....	19,049.68
Palmer, S. T.,* Okemah	.....	.....	6,485.40
Powers, M. F. and Anna L., Tulsa	32,085.00	.....	52,039.22
Powers, M. F.,* Tulsa	12,966.00	.....	23,145.41
Probst, George C.,* Tulsa	.....	.....	4,551.48
Phelps, Lula E.,* Oklahoma City	.....	.....	2,747.99
Peek, Bun M.,* Jackson, Utah	1,804.52	.....	2,860.32
Pine, W. B., Okmulgee	69,941.63	.....	114,722.94
Pine, W. B., Okmulgee	.....	175,023	14,108.11
Pine, W. B., Okmulgee	18,590.38	.....	27,039.01
Pine, W. B., and Phillips Pet. Co., Okmulgee	3,522.96	.....	5,610.00
Pine, W. B., Okmulgee	21,529.04	.....	34,147.83
Pugh, W. M., Marlow	.....	.....	5,392.41
Poplin, G. C. and A. C. Neal, Tecumseh	.....	.....	6,406.68

(Continued on next Page)

"The Secret of Success is the Constancy of Purpose"

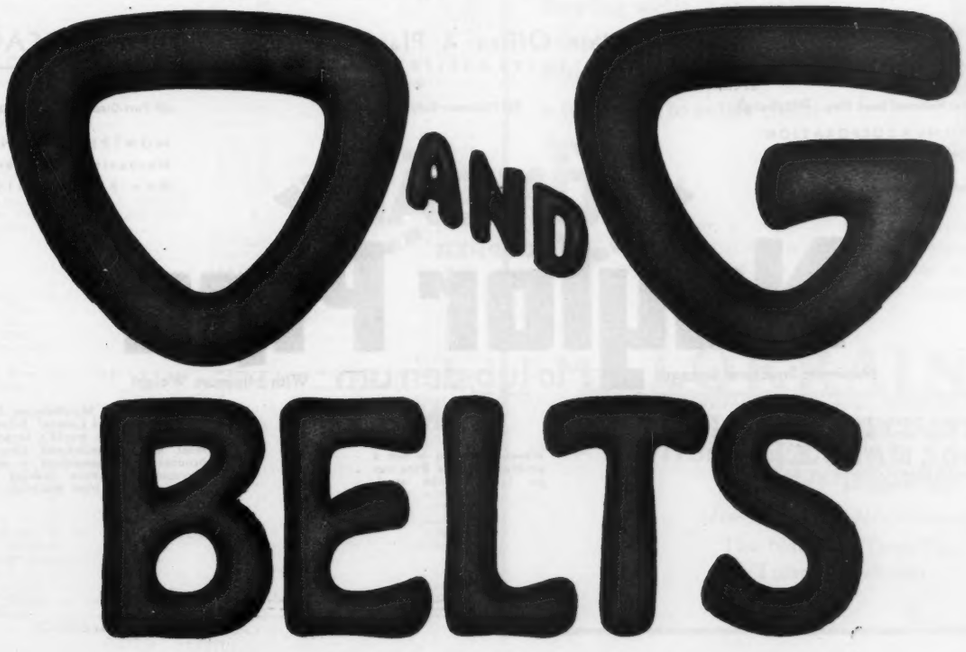
For 20 years O&G has been manufactured with the sole idea in mind of building a REAL OIL COUNTRY BELT—possessing all the necessary qualities of good belting.

Adequate tensile strength.
Plies mechanically joined together.
High Elasticity.
Impervious to the action of oil and gas.
High co-efficient of friction.
Pliability.

O&G *Has an enviable reputation of long standing.*

Stock Carried In All Fields At All "Oilwell" Stores.

IMPERIAL BELTING CO.
CHICAGO, ILL.
Manufacturers of High Grade Fabric Belts



One and one-half ton truck hauling nine uniform 40 foot lengths of 16" Naylor Pipe

Saving $392.83

Per Mile in Trucking, Unloading and Stringing ...Because of one Naylor Pipe advantage

TRUCKING, unloading and stringing a 12" Naylor Pipe line cost one oil company only $114.05 per mile.

Compared with their cost figures on another 12" line of standard weight pipe, random 18 to 22 foot lengths, laid under similar conditions---the saving was $392.83 per mile.

Naylor Pipe is the lightest weight pressure pipe. It weighs only half as much as standard weight wrought pipe.

Because of this light weight, trucks hauling Naylor Pipe can carry double the load...fewer trips are needed. Unloading is simplified---as well as stringing, because the light weight makes handling easier, faster and requires only half as many men on the job.

But trucking, unloading and stringing wasn't the only economy on this 12" Naylor Line. The complete comparison of the cost figures on the two lines---including all costs from freight to "as laid in the ground"---showed a net saving of $2,064.74 per mile on Naylor Pipe.

For the greatest economy, lay all your lines with Naylor Pipe.

NAYLOR PIPE COMPANY, Main Office & Plant, 1230 E. 92nd St., CHICAGO

SALES OFFICES

25 Church St., New York
Witherspoon Bldg., Philadelphia
1209 First National Bank Bldg., Pittsburgh.
507 Philtower Bldg., Tulsa
601 Post-Dispatch Bldg., Houston

DUCOMMUN CORPORATION
LOS ANGELES SAN FRANCISCO
Exclusive Distributors:
California, Arizona, Nevada and Utah

MONTREAL, CANADA
Mechanical Equipment Co.,
New Birks Building

TONCAN COPPER

Naylor Pipe

Maximum Structural Strength Mo-lyb-den-um With Minimum Weight

IRON

Standardized Naylor Pipe is made in sizes 6" to 12" I. D. and 14" to 20" O. D. in any uniform length desired up to 40' 0". Ends made to wrought pipe standards for all types of coupling.

Where corrosion is not a problem, Naylor Pipe can be furnished in steel.

Toncan Copper Molybdenum Iron is a development of Central Alloy Steel Corporation, the world's largest and most highly specialized alloy steel producers. It possesses a superior corrosion resistance, making it the favored pipe material.

Name and address—	Barrels	M. Feet	Amount
Q			
Quimby, John,* Montebello, Calif.	3,054.39	.....	5,314.59
R			
Reliance Oil Co., Houston, Tex.	3,662.66	.....	5,230.02
Reliance Oil Co., Houston, Tex.	4,427.59	.....	8,365.44
Royalties Management Corp.,* New York City	.....	.....	30,066.06
Royalties Trustee Corp.,* Wilmington, Del.	.....	.....	2,676.96
Royalty Corp. of America,* Tulsa	44,948.54	.....	74,354.26
Royalty Corp. of America and Hartford Accident & Insurance Co., Tulsa	.....	.....	15,262.99
Red Bank Oil Co., Tulsa	67,760.43	.....	103,730.85
Reiter-Foster Oil Corp., Tulsa	44,572.18	.....	73,192.69
Reiter-Foster Oil Co.,* Tulsa	3,943.73	.....	6,251.77
Riverland Co., Tulsa	10,778.31	6,873	18,288.32
Riverland Co.,* Tulsa	1,690.60	.....	2,543.32
Riverside Oil & Refining Co., Tulsa	8,852.01	.....	13,984.59
Reserve Petroleum Co., Tulsa	18,922.78	.....	29,506.49
Reserve Petroleum Co.,* Tulsa	1,986.08	.....	3,421.26
Rockland Oil Co., Ardmore	24,482.17	.....	29,513.34
Rena Royalty Co.,* Tulsa	15,988.82	.....	27,243.92
Reed, Frank H.,* Neosho, Mo.	.....	.....	22,324.62
Reed, Isabella,* Neosho, Mo.	12,146.47	.....	23,816.18
Reed, Isabella and Frank,* Neosho, Mo.	.....	.....	87,668.95
Ryan Consolidated Pet. Corp., Tulsa	5,317.74	.....	8,241.99
Ryan, Thomas,* Flanagan, Ill.	.....	.....	7,134.35
Reynolds Oil & Royalty Co., Okmulgee	16,546.51	.....	27,213.02
Rainey, J. W.,* Shawnee	.....	.....	20,812.99
Roberts, Thomas C., Ardmore	.....	.....	6,291.85
Russell, Helen B. and Horace B. Olds, paid by Colins Oil Co., Oklahoma City	44,758.15	30,155	74,029.07
Rice, N. D.,* Sulphur	.....	.....	10,233.34
Rockwell, J. A.,* Warren, Pa.	4,315.21	.....	7,449.38
Ralph, B. B.,* Kansas City, Mo.	.....	.....	4,022.83
Robertson, B. H., Nowata	4,029.12	.....	5,725.18
Reed and Harmon, Nowata	4,957.76	.....	6,915.66
Rone, J. L. and Sudie,* Walters	.....	.....	3,823.45
Replogle and Johnston,* Oklahoma City	.....	.....	19,849.30
Rutz, Jake, Oil Co., Morris	8,162.81	.....	11,791.32
Rascoe, M. L.,* Burlingame, Calif.	.....	.....	11,911.72
Rogers Oil & Gas Co., Holdenville	.....	.....	36,815.92
Rogers, B. H.,* Holdenville	.....	.....	6,432.10
Rogers, B. H.* (special), Holdenville	.....	.....	18,158.35
Rogers, W. G., Holdenville	.....	.....	4,547.63
Rogers, Leslie,* Tulsa	4,866.03	4,592	8,810.53
Rogers, Calloway and Rosa,* Earlsboro	.....	.....	20,737.25
Robins, J. W., Fort Worth, Tex.	7,999.36	.....	8,860.73
Rooney, L. H.,* Muskogee	.....	.....	2,609.16
Russell, Dora C.,* Duncan	1,569.68	.....	2,022.70
Roper, H. C.,* Ada	.....	.....	2,207.15
Regan, L. E.,* Shawnee	.....	.....	2,170.42
Ritts, Leonard C.,* Tulsa	.....	.....	2,831.54
Richardson, Zella,* Tecumseh	.....	.....	5,512.07
Rigdon, C. M.,* Crescent	.....	.....	30,680.88
Ramsey, W. R. and W. E. and Ramsey Pet. Corp., Oklahoma City	116,283.27	.....	138,051.44
Ramsey Petroleum Corp., Oklahoma City	.....	59,265	4,546.57
Regal Oil & Gas, Tulsa	20,871.93	.....	32,137.60
Robinson, E. L., Tulsa	5,836.07	.....	7,541.88
Robinson, E. L.,* Tulsa	2,323.80	.....	3,551.34
Robinson, E. L. and Gibson and Zahniser Oil Corp., Tulsa	5,204.48	18,458	9,848.67
Rex Oil & Gas, Winchester, Ky.	5,635.84	.....	7,392.37
Rouse, Scott,* Enid	.....	.....	2,148.62
Roxana Petroleum Corp., Tulsa	1,903,812.68	.....	3,004,739.33
Roxana Petroleum Corp., Tulsa	.....	4,968,401	142,956.65
Roth, C. E., Independence, Kans.	4,723.61	.....	3,763.75
Ray, Joe, Chickasha	.....	.....	10,786.29
Ray, Joe,* Chickasha	.....	.....	2,729.06
S			
Shell Petroleum Corp., St. Louis, Mo.	1,903,812.68	.....	3,004,739.40
Shell Petroleum Corp., St. Louis, Mo.	.....	4,968,401	142,956.56
Shell Pet. Corp. (suspense), St. Louis, Mo.	.....	.....	38,667.33
Skelly Oil Co., Tulsa	665,002.49	.....	985,578.80
Skelly Oil Co., Tulsa	.....	Gas	68,243.35
Skelly Oil Co.,* Tulsa	10,327.97	.....	15,822.26
Shaffer, Marcia A., Admrx.,* Oklahoma City	1,730.76	1,465	2,973.78
Shaffer, J. C., Oklahoma City	39,095.92	.....	62,587.38
Shaffer, C. B., Chicago, Ill.	23,903.89	.....	30,020.28
Shaffer Oil & Ref. (suspense), Tulsa	.....	.....	2,015.95
Shaffer Oil & Refining Co., Tulsa	290,970.53	520,912	
	C. H. Gas	439,709	533,811.00
Savoy Oil Co., Tulsa	7,306.58	4,882	9,790.96
Simms Oil Co., Dallas, Tex.	192,940.63	185,524	327,492.76
Schonwald, Dave,* Oklahoma City	.....	.....	18,855.45
Schonwald, Harold,* Oklahoma City	.....	.....	3,207.50
Slick, T. B., Clarion, Pa.	311,916.51	.....	485,777.37
Slick, T. B., Clarion, Pa.	.....	353,139	13,615.92
Slick, T. B.,* Clarion, Pa.	38,787.38	.....	61,876.97
Slick, T. B.,* Clarion, Pa.	.....	58,826	5,349.84
Sinclair, H. F.,* New York City	.....	.....	10,302.06
Sinclair Crude Oil Purchasing Co. (surpense)	.....	.....	110,944.66
Sinclair Oil & Gas Co., Tulsa	3,665,089.51	.....	5,792,708.58
Sinclair Oil & Gas Co., Tulsa	.....	Gas	217,440.81
Sinclair Oil & Gas Co. (suspense), Tulsa	.....	.....	18,425.94
Selby, J. L., Muskogee	.....	.....	9,282.73
Selby Oil & Gas Co., Tulsa	37,853.26	17,287	47,778.73
Selby Oil & Gas Co.,* Tulsa	4,042.92	.....	6,598.03
Southland Royalty Co.,* Ponca City	.....	.....	52,777.75
Signal Oil Co., Tulsa	105,449.93	.....	163,611.66
Sidwell Drilling Co., Sapulpa	3,851.43	.....	5,953.21
Sands Petroleum Corp., Tulsa	8,351.01	.....	15,315.53
Standard Royalties of Canada, Inc.,* Toronto, Canada	Oil	.....	96,283.03
Standard Royalties of Canada, Inc., Toronto, Canada	.....	Gas	5,851.40
Standard Royalties Wewoka Corp.,* New York City	.....	.....	2,417.90
Sooner Oil & Gas Co., Sapulpa	.....	.....	5,214.33
Sheridan Oil Co., Tulsa	15,663.65	15,227	23,746.18
Sunray Oil Co., Tulsa	33,487.42	.....	51,159.09
Sun Royalty Co.,* Tulsa	16,838.62	.....	17,187.23
Sure Oil Corp., Tulsa	4,524.65	.....	6,843.05
Shasta Oil Co., Wichita Falls, Tex.	78,958.91	.....	110,444.83
Silurian Oil Co., St. Louis, Mo.	99,428.69	.....	168,337.48
Silurian Oil Co., St. Louis, Mo.	.....	51,521,038	4,989.75
Shoreline Oil & Gas Co., Tulsa	19,447.79	.....	29,726.57
Skelton-Moore Oil Co., Bartlesville	4,761.10	.....	6,621.54
Slab Oil Co., Ardmore	10,805.23	.....	21,031.79
Snowden & McSweeney Co., New York City	28,576.78	10,028	38,011.89
Sterling Oil & Gas Co., Tulsa	5,152.92	.....	7,054.91
Sneed Royalty Co.,* Tulsa	.....	.....	18,603.86
Seneca Royalties Co.,* Oklahoma City	.....	.....	2,891.48
Sturm Drilling Co., Ardmore	14,287.31	.....	19,705.18
Shertzer, C. P., Dewey	5,626.96	.....	7,017.65
Stamper, Jennie,* Oklahoma City	.....	.....	6,122.27
Stamper, Harvey, estate,* Oklahoma City	.....	.....	6,122.27
Schonwald, Morris,* Oklahoma City	.....	.....	2,235.60
Schonwald, Sophie,* Oklahoma City	.....	.....	7,251.11
St. Germain, R. J., Tulsa	.....	.....	4,944.33
Sherman, Laura,* Tecumseh	.....	.....	2,147.14
Stewart, William E.,* Wellsville, N. Y.	.....	.....	2,562.82
Southwest Production Co., Bristow	.....	226,221	18,864.29
Stacy, Dean M., and Harold F. Young,* Oklahoma City	1,472.63	.....	2,053.53
Simpson, A. O., Ardmore	1,304.07	.....	2,211.32
Simpson, W. E.,* St. Louis, Mo.	1,304.07	.....	2,211.32
Simpson-Fell Oil Co., Ardmore	21,281.81	1,637	27,177.51

(Continued on Page 122)

LORRAINE Gas & Oil SEPARATORS

famous throughout the world for consistent and uninterrupted performance . . . . . .

The LORRAINE Type "M"

Designed to handle efficiently the widest variation in volumes of both gas and oil — automatically controlling the varying gas pressure and oil flow and eliminating the personal element in the care of flowing wells. Especially adapted to wells that flow by the head, having a tendency to settle them down.

Write for a copy of the Lorraine Catalog, containing illustrations, descriptions and specifications of the complete line of Lorraine Automatic Gas and Oil Separators.

THE LORRAINE CORP.
MANUFACTURERS AND DISTRIBUTORS
OIL WELL SPECIALTIES
115th and Alameda Streets
Los Angeles, Calif.

Mid-Continent Distributors:
The National Tank Co.,
Tulsa, Oklahoma

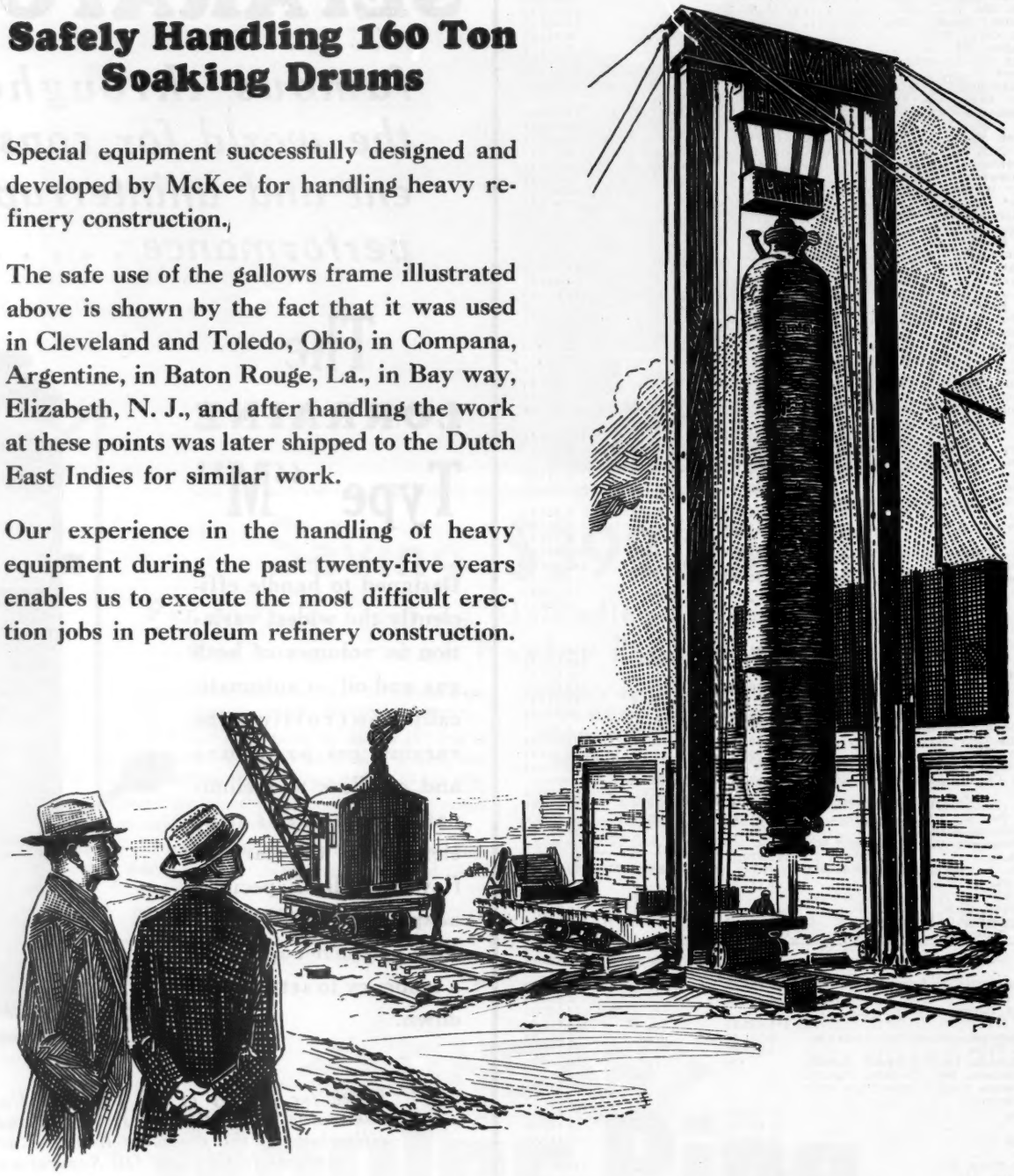
McKee Performance

Safely Handling 160 Ton Soaking Drums

Special equipment successfully designed and developed by McKee for handling heavy refinery construction.

The safe use of the gallows frame illustrated above is shown by the fact that it was used in Cleveland and Toledo, Ohio, in Compana, Argentine, in Baton Rouge, La., in Bay way, Elizabeth, N. J., and after handling the work at these points was later shipped to the Dutch East Indies for similar work.

Our experience in the handling of heavy equipment during the past twenty-five years enables us to execute the most difficult erection jobs in petroleum refinery construction.



ARTHUR G. McKEE & CO.

Engineers & Contractors

2422 EUCLID AVE. CLEVELAND, O., U. S. A.

Hatcher et als' No. 1 Moore heirs, 300 ft. N, 300 ft. E, C, Sec. 32-10-12 ..... Derrick.
Magnolia Pet. Co.'s No. 2 McLeroy, 230 ft. S, 200 ft. W, NE cor. W½ SE SW, Sec. 33-10-12 ..... Drlg. hard chalk 2,072 ft.

SABINE PARISH—ZWOLLE

Amerada Pet. Corp.'s No. 1 Bowman-Hicks, 330 ft. N, 330 ft. W, SE cor. NE NE, Sec. 33-8-12 ..... 500 ft. oil in hole; S.D; W.O.S.R. 2,456 ft.
Benedum & Trees Oil Co.'s No. 3 Bowman-Hicks, 330 ft. S, 330 ft. W, NE cor. SE, Sec. 34-8-12 ..... Began drlg. Feb. 14; cmtd. 12½-in. 101 ft; drlg. 260 ft.
R. L. Gay, trustee's No. 6 Bowman-Hicks, 900 ft. N, 800 ft. W, SE cor. NW SE, Sec. 14-7-14 ..... W.O; 60 ft. oil in hole; T.D. 2,513 ft.
Benedum & Trees Oil Co.'s No. 4 Bowman-Hicks, 330 ft. N, 330 ft. W. C, Sec. 34-8-12 ..... Rig up.
Benedum & Trees Oil Co.'s No. 5 Bowman-Hicks, 900 ft. S, 1,400 ft. W, C, Sec. 34-8-12 ..... Rig up.
Benedum & Trees' No. 6 Bowman-Hicks, 330 ft. N, 330 ft. E, SW cor. SE, Sec. 33-8-12 ..... Derrick.
Benedum & Trees Oil Co.'s (was R. L. Gay, trustee's) No. 2-A Bowman-Hicks Lbr. Co., 200 ft. S, 200 ft. W, NE cor. NE NW ..... Drlg. 8⅛-in. plug 2,390 ft; T.D. 2,398 ft.
R. L. Gay, trustee's No. 3 Sabine Lbr. Co., 1,120 ft. N, 200 ft. E, SW cor., Sec. 13-7-14 ..... W.O. 120 ft. oil in hole; T.D. 2,255 ft.
W. G. Gray's No. 1 Bolin, Sec. 31-8-12 ..... Rig up.
Haynes Bros.' No. 1 Dover, 1,120 ft. W, 200 ft. N, SE cor. NE, Sec. 28-8-12 ..... Drlg. chalk 2 601 ft.
Lide et als' No. 2 Sabine Lbr. Co., 230 ft. S, 330 ft. W, NE cor. NW SE, Sec. 31-8-12 ..... Rigging up.
V. M. Miller's No. 1 Colquitt, 300 ft. S, 230 ft. W, NE cor. SE, Sec. 31-8-12 ..... Rig up.
Olsen Bros.' No. 1 Keeler, SW cor. SW SE. Sec. 27-8-12 .. T.A. 2,625 ft.
Olsen Bros.' No. 1 Leone, 150 ft. N, 250 ft. E, SW cor. SW NW, Sec. 32-8-12 ..... Rig up.
Ruston Drlg. Co.'s No. 1 Bowman-Hicks, 330 ft. S, 330 ft. W, NE cor., Sec. 4-7-12 ..... Drlg. 2,090 ft.
Ruston Drlg. Co.'s No. 1-A Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. SW SW, Sec. 35-8-12 ..... Derrick.
Ruston Drlg. Co.'s No. 1 Holliday, 330 ft. N, 330 ft. E, SW cor. NW, Sec. 35-8-12 ..... S.G. 2,469 ft; tested dry 2,563 ft; arranging to deepen.
Sabine O. & G. Co.'s No. 1 Anderson, 200 ft. N, 200 ft. E, SW cor. SW NW, Sec. 19-18-13 ..... Tested S.W. 2,603 ft; W.O.
Standard Oil Co.'s No. 1 L. N. Nunn, 990 ft. S, 330 ft. E, C, Sec. 32-8-12 ..... Location.
Stovall Drlg. Co.'s No. 1 Lefkovitz, 247 ft. N, 250 ft. W, SE cor. N¾ SE NW, Sec. 33-8-12 ..... Drlg. 1,570 ft.
A. H. Tarver's No. 1 Sabine State Bank, 250 ft. N, 250 ft. W, C, Sec. 27-8-12 ..... Cmtd. 8⅛-in. 2,332 ft.
Tippett Drlg. Co.'s No. 1 Hughes, 200 ft. S, 200 ft. E, NW cor. SW NW, Sec. 36-8-12 ..... S.O. 2,540 ft; dry; drlg. 2,576 ft; arranging to deepen.
Warner-Quinlan Co.'s No. 1 Sabine Lbr. Co., 238 ft. N, 328 ft. W, SE cor. NW NE, Sec. 34-8-12 ..... Tested dry 2,438 ft; W.O. 2,495 ft.
Warner-Quinlan Co.'s No. 1 Peterson, 660 ft. S, 660 ft. W, NE cor. NW SE, Sec. 26-8-13 ..... Tested dry 2,205 ft; fishing D.S. 2,475 ft.

UNION PARISH

Lyons Gas Co.'s No. 2 Jones, 1,190 ft. W, 138 ft. S, NE cor. NW, Sec. 11-20-3 ..... Began drlg. Feb. 13; cmtd. 12-in. 87 ft; 8-in. 840 ft.

WEBSTER PARISH—COTTON VALLEY

Palmer Corp.'s No. 3 Miller, 660 ft. N, 660 ft. E, SW cor., Sec. 28-21-10 ..... Cmtng. 6⅝-in. 4,365 ft.
Standard Oil Co.'s No. 1-B Crichton, 660 ft. S, 660 ft. E, NW cor., Sec. 33-21-10 ..... Drlg. shale 3,740 ft.

WEBSTER PARISH—SAREPTA AND SHONGALOO

Bateman et als' No. 2 Womble, 2,840 ft. S, 1,120 ft. E, NW cor., Sec. 1-22-11 ..... Cmtd. 6-in. 2,701 ft; T.D. 2,715 ft; 1,500 ft. fluid; 4-ft. sand; W.O.S.R.
Donohoe O. & G. Co.'s No. 1-B W. B. Roseberry, 250 ft. S, 250 ft. E, C, Sec. 19-23-9 ..... Began drlg. Nov. 25; S.D. 104 ft
Pat Hudson's No. 2 S. Gardner, 330 ft. N, 300 ft. E, C, Sec. 1-22-11 ..... Derrick.
Pat Hudson's No. 1 B. L. Slack, 330 ft. W, 330 ft. N, SE cor. SW, Sec. 36-23-11 ..... Rig up.
Jacob Luskin's No. 2 Pardee, 1,270 ft. W, 50 ft. S, NE cor. NW, Sec. 3-22-11 ..... W.O.S.R. 2,656 ft.
Magnolia Pet. Co.'s No. 1 J. P. Baker, 1,120 ft. S, 225 ft. E, NW cor. SW, Sec. 35-22-11 ..... Arranging to plug back to 3,054 ft; to test show estimated at 7,000,000 ft. gas, 3,284 ft; T.D. 3,392 ft.
Magnolia Pet. Co.'s No. 2 Denman, 100 ft. N, 160 ft. W, SE cor. NE NW, Sec. 1-22-11 ..... Cmtd. 8⅛-in. 2,737 ft; T.D. 2,749 ft.
Merritt & Merritt's No. 1 Boucher (no check), SE SE, Sec. 17-23-11 ..... Began drlg. Feb. 11; cmtd. 12-in. 141 ft; drlg. 250 ft.
Sarepta Oil Co.'s No. 1 L. S. Gardner, 300 ft. S, 300 ft. W, C, Sec. 1-22-11 ..... W.O.S.R; 600 ft. fluid; T.D. 2,719 ft.

ARKANSAS

JOHNSON COUNTY—CLARKSVILLE

Ark.-La. P. L. Co.'s No. 1 Patterson, 1,020 ft. S, 2,570 ft. E, NW cor., Sec. 14-10-24 ..... Fishing for bit 2,230 ft.

NEVADA COUNTY

Roy Davis et als' No. 1 Chas. Henry, 1,120 ft. N, 1,120 ft. W, SE cor., Sec. 10-12-20 ..... Derrick.
C F. Steele's No. 1 E. W. Groves, Sec. 21-14-20 ..... Shut down.

OUACHITA COUNTY—MOUNT HOLLY DISTRICT

McDonald Bros.' No. 2 Wilson, 700 ft. S, 275 ft. W, NE cor. NW SW, Sec. 25-15-18 ..... Rig up.

OUACHITA COUNTY—SMACKOVER

L. H. Hamilton's No. 1 Arnold & Doyle, SE SE, Sec. 23-15-16 ..... Bailing to test 2,039 ft.
Southern Producing Co.'s No. 3-A Watts, 700 ft. E, 150 ft. N, SW cor. SE SW, Sec. 27-15-15 ..... Began drlg. Feb. 15; cmtd. 10-in. 100 ft; drlg. 1,020 ft.
Standard Oil Co.'s No. 11 Powell, 150 ft. S, 150 ft. E, NW cor. NE NW, Sec. 34-15-15 ..... W.O.S.R; 400 ft. fluid; T.D. 2,077 ft.
J D. Wingfield's No. 1 Martin, SW cor., Sec. 26-15-15 .. Set 6⅝-in. 2,085 ft; tested little oil and S.W; W.O; T.D. 2,115 ft

OUACHITA COUNTY—STEPHENS

Magnolia Pet. Co.'s No. 1 Grayson, C, Lot 30, NE SE, Sec. 21-15-19 ..... W.O.S.R; 800 ft. fluid; T.D. 1,478 ft.
Magnolia Pet. Co.'s No. 2 Grayson, 150 ft. N, 200 ft. W, SE cor. NE, Sec. 21-15-19 ..... Location.

UNION COUNTY—EL DORADO

H. L. Hunt's No. 6 Pratt, 150 ft. N, 330 ft. E, SW cor. NE NE, Sec. 7-18-15 ..... Setting tubing; T.D. 2,210 ft.
Malloy & Co.'s No. 4 Goodwin, 300 ft. N, 300 ft. E, SW cor. NE NE, Sec. 36-17-16 ..... Drlg. 1,410 ft.
Malloy & Co.'s No. 3 Robertson, NE cor. S½ SW NE, Sec. 6-18-15 ..... Location.
Rice et als' No. 1 W. Ralty, 150 ft. S, 150 ft. E, NW cor. SW, Sec. 7-17-15 ..... Spudded July 18; cmtd. 10-in. at 92 ft.
Weisinger et als' No. 1 Lacy, 181 ft. S, 557 ft. W, NE cor. NW, Sec. 6-18-15 ..... W.O.S.R; 25-ft. sand; T.D. 2,205 ft.
Weisinger & Ball's No. 1 Rogers, 1,014 ft. N, 150 ft. E, SW cor. E½ SW SE, Sec. 31-17-15 ..... Drlg. 1,320 ft.

UNION COUNTY—SMACKOVER

E. L. Champan's No. 2 Bradley, 330 ft. N, 330 ft. E, SW cor. Lot 3, NW, Sec. 2-16-16 ..... Rig up.
Lion Oil Ref. Co.'s No. 1 James, CWL, Lot 2, NW, Sec. 6-16-15 ..... T.A. 2,013 ft.

EAST TEXAS

PANOLA COUNTY

Ark.-La. P. L. Co.'s No. 11 Werner, 1,850 ft. S, 1,052 ft. W, NE cor. E. F. Mitcheson Sur. ..... Drlg. 2,537 ft.
Calatex O. & G. Co.'s No. 3 Caldwell, 243 ft. S, 1,034 ft. W, SE cor. John Womack Sur., in Jas. Shadoin Sur. ..... S.D; W.O. 1,072 ft.
Magnolia Pet. Co's No. 2 G C. Tiller, Jane Thorpe Sur.. Fishing D.S; T.D. 3,303 ft.
Magnolia Pet. Co.'s No. 6 G. C. Tiller, 393 ft. S, 1,990 ft. E, NW cor. Jane Tharp Sur. ..... Drlg. lime and shale 3,280 ft.
Nat. Gas Prod. Co.'s No. 8 Roquemore, B. C. Jordan Sur.. Drlg. 4,000 ft.
The Texas Co.'s No. 4 H. L. Brumble, 945 ft. E, 745 ft. N, SW cor.. E. F. Mitcheson Sur. ..... Drlg. shale and boulders 2,000 ft.
D. Thomason's No. 5 J. M. Trosper, 4,200 ft. N, 335 ft. W, SE cor. Jane Thorpe Sur. ..... Location.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 74)

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 Siemmons, SW cor., Sec. 73, Blk. M-17, B.S.&F. Sur. ..... Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur. ..... S.D. 510 ft. for csg.

CHILDRESS COUNTY

Continental Oil Co. and Sun Oil Co.'s No. 1 Johnson, 660 ft. from NE, Sec. 580, Blk. H, W.&N.W. Sur. .. Reaming 20-in. csg. at 440 ft.
C. L. Sloane et als' No. 1 B. P. Smith, Sec. 49, F. P. Knott lands ..... S.D. 4,675 ft.

COCHRAN COUNTY

Westbrook et als' No. 1 Slaughter, 400 ft. S and E, Labour 67, League 118, Knox Co. School lands ..... Fishing 4,742 ft.

COLLINGSWORTH COUNTY

Sharp Bros.' No. 1 Aldons, 410 ft. N, 330 ft. E, Sec. 96, Blk. 16, H.&G.N.R.R. Sur. ..... Location.

DONLEY COUNTY

Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. N line, 985 ft. E line, Sec. 22, Blk. E, D.&P.R.R. Sur. ..... T.D. 3,006 ft; contract depth.
Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk. G, G.C.&S.F. Sur. ..... U.R. 6⅝-in. csg. 3,300 ft.

GRAY COUNTY

Adams Oil Co.'s No. 4 Morse, 330 ft. S and W, NE cor., Sec. 3, Blk. 26, H.&G.N.R.R. Sur. ..... S.D. 2,495 ft; S.O.
Baldridge & Lilley's No. 1 Melton, 330 ft. N and W, E½ SE, Sec. 95, Blk. B-2, H.&G.N.R.R. Sur. ..... Location.
Camel Oil Co.'s No. 2-B Harrah, 330 ft. N and E, Sec. 150, Blk. 3, I.&G.N.R.R. Sur. ..... S.D. 950 ft.
Constantine et als' No. 1 Crews, 330 ft. S and W, NE cor. SW, Sec. 20, Blk. 30, H.&G.N.R.R. Sur. ..... S.G. 2,580-2,604 ft.; S.D. 2,642 ft.
Danciger Ref. and Champlin Ref. Co.'s No. 4 Cook-Faulkner, 330 ft. S, 1,146 ft. W, NE cor. E 120 ac., W 210 ac., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. ..... Location.
Danciger Ref. and Champlin Ref. Co.'s No. 5 Cook-Faulkner, 330 ft. S, 706 ft. W, NE cor. E 120 ac., W 210 ac., Sec. 30, Blk. B-2, H.&G.N.R.R. Sur. .... Location.
Danciger et als' No. 11 Jackson, 330 ft. S, 1,320 ft. W, NE cor. NW, Sec. 88, Blk. B-2, H.&G.N. Sur. ..... T.D. 2,906 ft.
Danciger O. & R. Co.'s No. 5 Morse, 330 ft. N and E, SW SW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. .... S.D. 2,505 ft.
Danciger O. & R. Co.'s No. 1 Shaw, 330 ft. S, 286 ft. E of E 39½ ac., NW, Sec. 5, Blk. 1, A.C.H.&B. Sur. .. T.D. 2,588 ft.
Danciger O. & R. Co.'s No. 1 Williams, 330 ft. N, 330 ft. E, S½ NW ..... Estimated 15,000,000 ft. gas 2,610-70 ft; S.D. 2,720 ft.
Dixon Creek Oil Co.'s No. 1 Harrah, 330 ft. each way from NW cor. SE NE, Sec. 150, Blk. 3, I.&G.N. R.R. Sur. ..... Rigging up rotary.
Dunlop's No. 4 Morse, 330 ft. N and E, SW cor. SW, Sec. 17, Blk. A-9, H.&G.N.R.R. Sur. ..... T.D. 2,431 ft.
Follet Pet. Corp.'s No. 1 Hood, 330 ft. S and W of W 80 ac., SW, Sec. 32, Blk. 3, H.&G.N.R.R. Sur. ..... Drlg. 275 ft.
Sines & Reiger's (formerly Eslick et als') No. 1 Mrs. J. A. Hopkins, NW cor. W 80 ac. of SW, Sec. 84, Blk. B-2, H.&T.C. Sur. ..... S.D. 3,206 ft.
Gardner Bros. and Collins' No. 2 Saunders, 955 ft. S, 330 ft. E of W 68 ac., E½, J. G. Eustice Sur. ..... Location.
Grallup et als' No. 1 Morse, 330 ft. each way NE cor. SE, Sec. 3, Blk. 26, H.&G.N.R.R. Sur. ..... Drlg. 745 ft.
Gulf Prod. Co.'s No. 1 Barrett, 967 ft. N and E, SW cor. NE, Sec. 131, Blk. 3, I.&G.N.R.R. Sur. ..... S.D. 2,900 ft.
Gulf Prod. Co.'s No. 1 Bowers, 967 ft. N and E, SW cor. SE, Sec. 63, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 615 ft.
Gulf Prod. Co.'s No. 3 Worley-A, 330 ft. N, 1,650 ft. W, SE SW, Sec. 36, Blk. 3, I.&G.N.R.R. Sur. ..... S.D. 4,810 ft.
Haymer O. & G. Co.'s No. 1 Morse, 330 ft. each way out of SE cor. E½ SE, Sec. 45, Blk. A-9, H.&G. N. Sur. ..... Drlg. 2,125 ft.
Herragan Oil Co.'s No. 1 Bradford, 330 ft. N, 990 ft. E, Sec. 123, Blk. B-2 ..... First S.G. 2,475-80 ft; 15,000,000 ft. gas 2,515-40 ft; S.O. 2,932-50 ft; S.D. 3,140 ft.
Humble O. & R. Co.'s No. 1 Combs-Worley, 330 ft. S and W, N½ SE, Sec. 36, Blk. 3, I.&G.N.R.R. Sur. ... Drlg. 2,465 ft.; S.G. 2,340-45 and 242-20 ft.
Lenix et als' No. 1 Bradford, 330 ft. N and E, W½ SE, Sec. 118, Blk. B-2, H.&G.N.R.R. Sur. ..... Location.
Lyon et als' No. 1-A Morse, 330 ft. S and W, NW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... Rig.
Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W cor. SE, Sec. 200, Blk. B-2, H.T.N. Sur. ..... Spudded and S.D.
Magnolia Pet. Co.'s No. 4 Harrah, 330 ft. each way, SW cor. NW, Sec. 150, Blk. 3, I.&G.N.R.R. Sur. .... Drlg. 305 ft.
Magnolia Pet. Co.'s No. 1 Cubine, 330 ft. N and W, NE, Sec. 36, Blk. 25, H.&G.N.R.R. Sur. ..... Rigging up.
Magnolia Pet. Co.'s No. 5 Magnolia, 990 ft. N, 330 ft. E, SW cor., Sec. 14, Blk. 3, I.&G.N.R.R. Sur. ..... Rigging up.
Magnolia Pet. Co.'s No. 4 Wright, 330 ft. N and W, SE cor. S½ SW, Sec. 13, Blk. 3, I.&G.N.R.R. Sur. .. Location.
Magnolia Pet. Co.'s No. 5 Wright, 330 ft. N, 752 ft. W, SE cor. S½ SW, Sec. 13, Blk. 3, I.&G.N.R.R. Sur. .. Location.
McIlroy Oil Co.'s No. 1 Arnold, 330 ft. each way, NW cor. NW, Sec. 139, Blk. 3, I.&G.N.R.R. Sur. ..... Drlg. 2,650 ft.
McMan O. & G. Co.'s No. 7 Palmer, 990 ft. S, 930 ft. W, NE cor. of E 100 ac. of W 200 ac., Sec. 31, Blk. B-2, H.&G.N.R.R. Sur. ..... Drlg. 2,885 ft; S.G. 2,850 ft; S.O. 2,857 ft.
Mid-Continent Pet. Corp.'s No. 1 Laugham, 330 ft. S and W, W 231 ½ac. of N 310½ ac., Sec. 1, Blk. B-2, H.&G.N. Sur. ..... Location.
Operators Royalty Co.'s No. 1 Eddington, 330 ft. each way, NE cor. NW, Sec. 34, Blk. B-2, H.&G.N.R. R. Sur. ..... Drlg. 2,168 ft.
Oil Operators' No. 1 Bowers, 330 ft. N, 330 ft. E, Sec. 93, Blk. B-2, H.&G.N. Sur. ..... Show oil and gas 2,400-17 ft; S.O. 3,036-55 ft; first gas 2,483 ft; increase at 2,500 ft., 2,544 ft. and 2,950 ft; S.D. 3,090 ft.

Operators Oil Co.'s No. 5 Cook-Faulkner, 990 ft. N, 330 ft. W, SE, W 90 ac., Sec. 30, Blk. B-2, H.&G.N. Sur. — S.D. 884 ft; spraying 5 bbls. oil per hr; T.P. 2,860 ft; S.D. 2,900 ft.

Prairie O. & G. Co.'s No. 2 Langham, 330 ft. S and E, NW cor., W 230.3 ac., of S 310.5 ac. of Sec. 1, Blk. B-2, H.&G.N. Sur. — Location.

Reynolds et als' No. 1 Webb, 330 ft. N, 380 ft. E, NW, Sec. 60, Blk. 25, H.&G.N.R.R. Sur. — Location.

Rieger & Steckoll's No. 1 Bohr, 330 ft. S and E, Sec. 37, Blk. B-3, H.&G.N. Sur. — Drlg. 3,272 ft.

Smith & McDaniel's No. 1 Noble, 330 ft. N, 943 ft. E, SW NE, Sec. 49, Blk. A-9, H.&G.N.R.R. Sur. — Drlg. 2,660 ft.

St. Clair Oil Co.'s No. 1 Dial, 330 ft. S and W, NE cor. SE, Sec. 10, Blk. 25, H.&G.N.R.R. Sur. — Spudded and S.D.

St. Clair Oil Co.'s No. 1 L. S. Stockton, SE cor., Sec. 35, W. R. Lee Sur. — Spudded and S.D.

Stover and Shell's No. 1 Saunders, 990 ft. N, 330 ft. E, of N 100 ac. of W 149 ac., Sec. 3, B.&B. Sur. — 4,000,000 ft. gas 2,258-2,370 ft; T. D. 2,518 ft.

Southern Explin. Co.'s No. 1 Noel, 330 ft. S and W, W½ NW, Sec. 138, Blk. 3, I.&G.N.R.R. Sur. — Drlg. 2,565 ft.

The Texas Co.'s No. 1 Bell, 2,310 ft. N, 2,640 ft. W, Sec. 133, Blk. B-2, H.&G.N.R.R. Sur. — Cemented 8¼-in. csg. at 2,300 ft.

The Texas Co.'s No. 15 Saunders, 330 ft. N and W, SE cor. W½ SE, Sec. 4, Blk. 1, A.C.H.&B. Sur. — S.D. 2,610 ft.

The Texas Co.'s No. 1 Wright, 330 ft. S and W, SE, Sec. 13, Blk. 3, I.&G.N.R.R. Sur. — Drlg. 865 ft.

Travis & Rieger's No. 1 Mackie, 330 ft. N and E, Sec. 114, Blk. B-2, H.&G.N.R.R. Sur. — 16,000,000 ft. gas; T.P. 2,685 ft; rig burned 3,343 ft.

Travis et als' No. 1-B Webb, 330 ft. N and W, Sec. 61, Blk. 25, H.&G.N.R.R. Sur. — T.D. 2,639 ft.; swabbed 50 bbls. in 3 hours; swabbed dry to shoot; T.P. 2,610-18 ft.

Tripplehorn Oil Co.'s No. 1 Morse, 330 ft. S and W, SW SE, Sec. 17, Blk. A-9, H.&G.N.R.R. Sur. — Running 6⅝-in. csg. at 2,075 ft.

Vulcan O. & G. Co.'s No. 1 Carpenter, 330 ft. N and W of W 80 ac., NW, Sec. 25, Blk. 25, H.&G.N.R.R. Sur. — T.D. 1,520 ft; waiting on csg.

Wilson et als' No. 1 Heaston, 330 ft. S and W, Sec. 160, Blk. B-2, H.&G.N.R.R. Sur. — Location.

Wright Wilson, trustee's No. 1 Chapman, 175 ft. S and E lines, N½ NW, Sec. 69, Blk. 25, H.&G.N. Sur. — S.O. 2,685 ft; S.D. 2,693 ft.

Wilcox-Pampa Oil Co.'s No. 10 Combs-Worley, 330 ft. S and W, NE cor. SW SW, Sec. 35, Blk. 3, I.&G. N.R.R. Sur. — S.D. 2,820 ft; 32,000,000 ft. gas and 90 bbls. oil first 7 hrs; T.F. 2,811-13 ft.

HARTLEY COUNTY

Dana O. & G. Co.'s No. 1 Fritz, C NE, Sec. 81, Blk. 44, H.&T.C.R.R. Sur. — Set 8-in. csg. 2,787 ft.

HUTCHINSON COUNTY

Alamosa Oil Co.'s No. 4 Sanford, 310 ft. S, 320 ft. W, NE cor. N 160 ac., S 240 ac., Sec. 85, Blk. 46, H.& T.C. Sur. — S.O. and wtr. 3,010-11 ft; S.D. 3,095 ft.

Alexander et als' No. 1 Johnson, 1,709 ft. E, 330 ft. N of N 80 ac. of E½ E. T. Tomlinson Sur. — Drlg. 830 ft.

Barnsdall Oil Co.'s No. 4 Prichard "A" C SW NW, Sec. 3, Blk. 4, D.&S.E. Sur. — Drlg. 2,085 ft.

Continental Oil Co.'s No. 1 Johnson-E, 330 ft. N and E, SW cor. SE, Sec. 5, Blk. I, B.&B. Sur. — Drlg. 465 ft.

Danciger O. & R. Co.'s No. 1 Cheatham, 330 ft. N and E SW SE, Sec. 38, Blk. Y, A.&B. Sur. — Drlg. 275 ft.

Danciger O. & R. Co.'s No. 3 Moore, 330 ft. S and E, NW W½ SE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. — 1,000 ft. oil in hole; T.P. 3,003-20 ft; S.D. 3,020 ft.

Danciger O. & G. Co.'s No. 4 Moore, 330 ft. N and E, SW cor. W½ SE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. — Set 6-in. csg. at 2,825 ft.

Dixon Creek Oil Co.'s No. 1 Cheatham, 990 ft. E, 330 ft. S, N½ SE, Sec. 38, Blk. Y — Drlg. 580 ft.

Dixon Creek Oil Co.'s No. 2 Cheatham, 330 ft. N, 1,650 ft. W, SE cor. N½ SE, Sec. 38, Blk. Y — Rigging up.

Dixon Creek Oil Co.'s No. 1 Johnson Bros., 50 ft. S, 330 ft. W, NE cor. E 80 ac., J. Gammon Sur. — Drlg. 663 ft.

Gulf Prod. Co.'s No. 1 W. E. Herring, 1,320 ft. N, 1,395 ft. E, SW cor., Sec. 5, Blk. J, H.&G.N. Sur. — Drlg. 1,823 ft.

Gulf Prod. Co.'s No. 1 Herring-A, 990 ft. S, 990 ft. W, NE cor., George Bazon Sur. — Drlg. 1,174 ft.

Huey et als' No. 3 Smith et al, 330 ft. N, 660 ft. W, S 40 ac., of E 100 ac., SE, Sec. 12, Blk. Y — S.D. 2,702 ft.

Midwest Explin. Co.'s No. 1-B Pitcher, 330 ft. E and S line, W½ SW, Sec. 19, T.C.R.R. Sur. — Drlg. 890 ft.

Phillips Pet. Co.'s No. 2 Cheatham, 330 ft. S and E, NW cor. SE SE, Sec. 38, Blk. Y — Drlg. 560 ft.

Phillips Pet. Co.'s No. 1 Johnson-Burl, 330 ft. S and W, NE cor. W 240 ac., of N 320 ac., Sec. 4, Blk. 1, B.&B. Sur. — Location.

Phillips Pet. Co.'s No. 1 Johnson-Juanita, 330 ft. N and W, SE cor. W½, Sec. 5, Blk. I, B.&B. Sur. — Drlg. 560 ft.

Phillips Pet. Co.'s No. 1 Johnson-Trammel, 930 ft. N, 330 ft. W, SE cor. W½ NW, Sec. 38, Blk. Y — Drlg. 510 ft.

Phillips Pet. Co.'s No. 1 Johnson-Mayer, 990 ft. N and 990 ft. W line, NE, Sec. 37, Blk. Y, A.&B. Sur. — Drlg. 671 ft.

Phillips Pet. Co.'s No. 1 Johnson-Royal, 330 ft. S and E, NW cor. E½ NW, Sec. 34, Blk. Y — Location.

Phillips Pet. Co.'s No. 1 Johnson-Rudy, 330 ft. W, 330 ft. S, SW SW, Sec. 30, Blk. Y, A.&B. Sur. — Drlg. 670 ft.

Skelly Oil Co.'s No. 1 Byrd, 2,640 ft. E line, 3,960 ft. S line of W 3,094 ac., D. Luce Sur. — Rigging up 2,120 ft.

Spurlock et als' No. 1-A Christian, 440 ft. S, 300 ft. W, NE cor. SE SE, Sec. 38, Blk. Y — S.D. 320 ft.

The Texas Co.'s No. 5 Moore, 330 ft. N and W, SE cor. SW, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. — Rigging up.

Texarado Oil Co.'s No. 2 Sanford, 330 ft. S, 990 ft. W, NE cor. N 80 ac., of S 160 ac., Sec. 83, Blk. 46, H. &T.C.R.R. Sur. — Drlg. 750 ft.

LAMB COUNTY

Graham O. & G. Co. et' als' No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. — Drlg. 4,228 ft.

LIPSCOMB COUNTY

Brown et als' No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur. — S.D. 3,750 ft.

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. — Fishing 4,954 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch — Small S.O. 1,133-40 ft; S.D. 4,167 ft.

MOORE COUNTY

Canadian River Gas Co.'s No. 1-C Sneed, 660 ft. N and E, SW, Sec. 46, Blk. 6-T, T.&N.O.R.R. Sur. — U.R. 8-in csg. at 1,880 ft.

Fritch O. & G. Co.'s No. 1 Lee Bivins, C N 40 ac. of N 160 ac., Sec. 4, Geo. Mahan Sur. — 2,000,000 ft. gas 1,550-65 ft.; T.D. 3,212 ft.; S.O. 3,188 ft.; shot 40 qts. from 3,182-3,202 ft.; no results.

Gulf Prod. Co.'s No. 1 Kilgore, C SW, Sec. 22, Blk. P.Mc., E.L.R.R. Sur. — Drlg. 1,745 ft.

Operators Royalty Co. et als' No. 1 Jones, 330 ft. S line, 330 ft. E line, SW SW, Sec. 164, Blk. 3-T, T.&N.O.R.R. Sur. — Set 8-in. csg. 2,525 ft.

Red River Gas Co.'s No. 1 J. M. Shelton, 330 ft. each way from SE cor., Sec. 52, Blk. 3, G.&M. Sur. — Drlg. 2,560 ft.

MOTLEY COUNTY

Explin. Co.'s No. 6 Matador, 330 ft. N line, 330 ft. E line, Sec. 132, Blk. M — S.D. 4,011 ft.

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. — S.D. 580 ft.

POTTER COUNTY

Canadian River Gas Co.'s No. 1-N Masterson, 330 ft. E, 1,320 ft. S, Sec. 17, Blk. 3, G.&M.R.R. Sur. — Building rig.

RANDALL COUNTY

W. A. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14 — S.D. 1,250 ft.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. A-5 — Shot 10 qts. 5,270-93 ft; S.O. 5,288 ft; S.D. 5,992 ft; C.O.

TERRY COUNTY

Atlantic O. P. Co. et als' No. 1 Carlisle, 990 ft. S and E, Sec. 58, Blk. E, E.L.R.R. Sur. — Location.

WHEELER COUNTY

Burnett & Hosher's No. 1 Hosher, 330 ft. N and W, SW SE, Sec. 63, Blk. 17, H.&G.N.R.R. Sur — S.G. 1,455 ft.; S.D. 1,950 ft.

Dunaway Bros.' No. 1 Worley, 330 ft. S and W, NE cor. NW, Sec. 39, Blk. 24, H.&G.N.R.R. Sur. — S.D. 815 ft.

Edwards et als' No. 1 Cates, C NW NE, Sec. 73, Blk. 23, H.&G.N. Sur. — 20,000,000 ft. gas 1,655-1,744 ft.; S.D. 1,744 ft.; pulling big pipe.

Lela O. & G. Co.'s No. 1 Williams & Laycock, 330 ft. S, 209 ft. W, W½ NW, Sec. 20, Blk. A-8, H.&G.N. Sur. — 20,000,000 ft. gas 1,755-2,180 ft.; drlg. 2,180 ft.

Lone Star Gas Co.'s No. 1 Brown, C NW NE, Sec. 53, Blk. 23, H.&G.N.R.R. Sur. — Location.

Lone Star Gas Co.'s No. 3 Linkey, 330 ft. S and W, NE cor., Sec. 106, Blk. 23, H.&G.N.R.R. Sur. — Lost returns at 250 ft.

Lone Star Gas Co.'s No. 1 Ridinger, C NW NW, Sec. 65, Blk. 17, H.&G.N. Sur. — Rig on ground.

Murchison & Fain's No. 1-A Cooper, 330 ft. W, 330 ft. S, NW, Sec. 80, Blk. 23, H.&G.N.R.R. Sur. — Junked and abd. 1,455 ft.

Murchison & Fain's No. 1-B Cooper, 330 ft. N, 380 ft. E, SW cor. NW, Sec. 80, Blk. 23, H.&G.N.R.R. Sur. — Location.

Wischkamper et als' No. 2 Brown, C SE NE, Sec. 53, Blk. 23, H.&G.N.R.R. Sur. — Spudding.

Wischkamper et als' No. 2 Curry, C NW SE, Sec. 53, Blk. 23, H.&G.N. Sur. — Drlg. 1,740 ft.; 6,000,000 ft. gas at 1,673-1,740 ft.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 73)

CONCHO COUNTY

Duffy et al's No. 1 Callan, 1,520 ft. N and 1,120 ft. W of SE cor., Sec. 21, Blk. 10, H.&T.C.R.R. Sur. — Spudded and shut down.

Turner et al's No. 1 Borsig, 150 ft. from S of SE cor., G. Emmig Sur. 130, 6 mi. W of Paint Rock — Shut down 735 ft.

CRANE COUNTY

Simms and Atlantic's No. 1 University, 2,310 ft. from N, 990 ft. E, Sec. 39, Blk. 30, University Land — Top salt 1,070 ft.; total depth 2,810 ft.

Warner-Quinlan Co.'s No. 8 University, 990 ft. S and 330 ft. W of NE cor. of SW, Sec. 39, Blk. 30, University Land — Total depth 925 ft.; running 10-in. casing.

CROCKETT COUNTY

Empire Gas & Fuel Co.'s No. 1 Shannon, 330 ft. N and E of Sec. 42, T.C.R.R. Sur. — Top salt 1,130 ft.; top lime 2,468 ft.; top pay 2,615 ft.; total depth 2,660 ft.; 1 bbl. oil per hour; shot 50 qts. from 2,615-30 ft.; bailing 25 bbls. oil and 8 bbls. water per day; setting 8¼-in. casing 2,468 ft.

Lewis & Daniels' No. 1 Pecos River bed, 19 yds. S and 37° E of NW cor., Sec. 33, Blk. 1, I.&G.N. Sur. — Shut down 1,407 ft.

Magnolia Pet. Co.'s No. 1 Hoover, 2,310 ft. from N and 330 ft. from E of Sec. 12, Blk. 1, G.C.&S.F.R.R. Sur. — Top salt 660 ft.; drlg. 720 ft.

CULBERSON COUNTY

Grisham & Hunter Oil Corp.'s No. 1 Seay, 330 ft. from S and W of Sec. 16, Blk. 59, Twp. 7, T.&P.R.R. Sur. — Total depth 2,995 ft.

Hickey & Stiver's No. 1 C. O. Finley, 600 ft. N and 1,980 ft. W, Sec. 20, Blk. 82 — Small show oil 1,331 ft.; shut down 2,275 ft.; hole full water; elev. 3,874 ft.

Kornrumpf et al's No. 1 Garren, 330 ft. S and W Sec. 15, Blk. 79, Public School Land — Location.

West Coast Oil & Exploration Co.'s No. 1 McGregor, C NW, Sec. 14, Blk. 81 — Slight show oil 740 ft.; shut down 875 ft.; may abandon.

Scott & Dittman's No. 1 Miller, 1,160 ft. N and 2,480 ft. E, Sec. 1, Blk. 97, Public School Land — Rainbow 1,056 ft.; 300 ft. sulphur water 1,725 ft.; oil show 2,528 ft.; hole full sulphur water; running 6-in. casing; shut down 3,508 ft.

ECTOR COUNTY

Cosden Oil Co.'s No. 1 Kloh & Rumsey, 990 ft. S and 330 ft. E NW cor. Sec. 17, Blk. 44, Twp. 3s, T.&P. Sur. — Location.

Cosden Oil Co.'s No. 1 University-B, 1,650 ft. S and 440 ft. W of NE cor. Sec. 2, Blk. 35 — No report.

Cosden Oil Co.'s No. 2 University-B, 2,310 ft. S and 440 ft. W of NE cor. of Sec. 2, Blk. 35, University Land — Location.

C. P. Davis et al's No. 1 Hendricks, C SW Sec. 46, Blk. 42, Twp. 2s, T.&P.R.R. Sur. — Spudded and shut down.

Gulf Prod. Co.'s No. 1 State, 330 ft. N and 440 ft. W of SE cor. of S 160 ac. of Sec. 1, Blk. 35, University Land — Location.

Gulf Prod. Co.'s No. 1 State-A, 330 ft. S, 440 ft. W of NE cor. of N half of S half Sec. 2, Blk. 35, University Land — Location.

Humble Oil & Ref. Co.'s No. 2 Kloh-Rumsey-D, 2,310 ft. S and 440 ft. E of NW cor. of Sec. 7, Blk. 44, Twp. 3s, T.&P. Sur. — Drlg. 550 ft., red rock.

Humble et al's No. 3 Kloh-D, 2,325 ft. N and 440 ft. E of SW cor. Sec. 7, Blk. 44, Twp. 3s — Building rig.

Humble et al's No. 4 Kloh-D, 322 ft. N and 440 ft. E of SW cor. Sec. 7, Blk. 44, Twp. 3s — Building rig.

Humble Oil & Ref. Co.'s No. 2 York, 990 ft. S and 440 ft. E of NW cor. of Sec. 16, Blk. 44, Twp. 3s, T.&P. Sur. — Drlg. 925 ft., red rock; set 10-in. casing 780 ft.

Humble Oil & Ref. Co.'s No. 3 York, 1,650 ft. S and 440 ft. E of NW cor. Sec. 16, Blk. 44, Twp. 3s, T.&P. Sur. — Drlg. 840 ft.

Humble et al's No. 4 York, 323 ft. S and 440 ft. E of NW cor. Sec. 16, Blk. 44, Twp. 3s — Building rig.

Humble et al's No. 5 York, 2,334 ft. S and 440 ft. E of NW cor. Sec. 16, Blk. 44, Twp. 3s — Building rig.

Humble et al's No. 6 York, 2,991 ft. S and 440 ft. E of NW cor. Sec. 16, Blk. 44, Twp. 3s — Building rig.

H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW, Sec. 16, Blk. 46, Twp. 3s, G.M.M.Br.&A. Sur. — Spudding.

Landreth Prod. Corp.'s No. 1-A University, NE Sec. 3, Blk. 35, 110 ft. E of No. 1-T — Spudding.

Landreth Prod. Corp.'s No. 1 University-R, 2,310 ft. N, 440 ft. W SE cor. Sec. 1, Blk. 35, University Land — Location.

Landreth Prod. Corp.'s No. 2 University-S, 330 ft. S and 440 ft. W of NE cor. Sec. 2, Blk. 35, University Land — Location.

Landreth Prod. Corp.'s No. 2-T University, 990 ft. from N and 330 ft. from E of Sec. 3, Blk. 35 — Drlg. 1,680 ft., salt and anhydrite.

Llano Oil Co.'s No. 1 Midland, 330 ft. N and W of Sec. 18, Blk. 44, Twp. 3s, T.&P.R.R. Sur. ... Drlg. 3,325 ft.
R. R. Penn et al's No. 1 Goodman et al, 2,640 ft. N and 330 ft. W of SE cor. Sec. 27, Blk. 44, T.&P.R.R. Sur. ... Location.

EL PASO COUNTY

Laytex's No. 1 Malone, 2,200 ft. SW and NW, Sec. 46, J. M. Day Sur. ... Shut down 1,481 ft.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlow, Sec. 60, V-8, J. C. Clift Sur. ... Shut down 3,000 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 Johnson, 440 ft. from N and 1,540 ft. from W of Sec. 3, Blk. R, Richardson Sur. ... Drlg. 1,355 ft.
Magnolia Pet. Co.'s No. 1 Lee, Sec. 357, 2,310 ft. from N and 4,286 ft. from W ... Drlg. 5,435 ft.
Mid-Kansas' No. 1 Stephens, Sec. 26, 1,800 ft. from N, 330 ft. E, El Paso County School Land ... Shut down 4,005 ft.

GAINES COUNTY

Louisiana Oil & Ref. Co.'s No. 1 Ralph, 1,320 ft. from S and W of Sec. 7, Blk. A-28, Public School Land ... Drlg. 4,523 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 6, H.&G.N. Sur. ... Location.
Pandem Oil Corp.'s No. 1 Stokes, 2,310 ft. N and E of SW, Sec. 32, Blk. 5, G.H.&H.R.R. Sur. ... Total depth 3,018 ft.; show oil 2,908-18 ft.; plugged back to 2,938 ft.; cleaning out and plugging back to shut off water after 90-qt. shot from 2,908-28 ft.; 200 ft. oil and 1,700 ft. water in hole; cleaning out and plugging back.

GLASSCOCK COUNTY

Amerada Pet. Corp.'s No. 2 Coffee, 1,650 ft. S and 2,310 ft. E of NW cor. Sec. 22, Blk. 33, Twp. 2s, T.&P. R.R. Sur. ... Set 8¼-in. casing at 2,082 ft.
California Co.'s No. 3 Curie, 990 ft. S and 2,310 ft. W of NE cor., Sec. 219, Blk. 29, W.&N.W.R.R. Sur. ... Showing oil from 3,022-31 ft.; total depth 3,671 ft.; plugged back to 3,536 ft.; cemented 6⅝-in. casing 3,426 ft.; show oil 3,472-3,502 ft.
California Co.'s No. 1 Jones, 330 ft. S from N and E lines, Sec. 25, Blk. 33, Twp. 2s, T.&P. Sur. ... Derrick.
Group No. 1 Oil and Continental Oil Co.'s No. 1 Phillips, 330 ft. S and 990 ft. E NW cor. Sec. 24, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ... Location.
F. H. E. Oil Co.'s No. 1 Cox, 330 ft. from S and E of SW Sec. 8, Blk. 33, Twp. 2s, T.&P. Sur. ... Spudding.
Simms Oil Co.'s No. 2 Coffee, Sec. 22, Blk. 33, Twp. 2s, 1,650 ft. from N, 330 ft. E ... Top pay 2,175 ft.; 500 ft. oil in hole; drlg. 2,300 ft.
Simms Oil Co.'s No. 3 Coffee, 990 ft. from N and 330 ft. from W of E half Sec. 22, Blk. 33, Twp. 2s ... Drlg. 1,950 ft.
Timberlake & Snyder's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor., Sec. 7, Blk. 34, Twp. 3s, T.&P. Sur. ... Show oil 970 ft.; cleaning out 1,715 ft.
World Oil Co.'s No. 2-C McDowell, Sec. 21, Blk. 34, Twp. 2s, 330 ft. S and 2,310 ft. E of NW cor. ... Oil from 2,435-42 ft.; total depth 2,453 ft.; now pumping 5 bbls. oil and 12 bbls. water.

HOWARD COUNTY

American Maracaibo Co.'s No. 4-A Settle, 1,040 ft. S and 330 ft. E of NW cor. Sec. 6, Blk. 32, Twp. 2s, T.&P. Sur. ... Drlg. 1,850 ft.
California Co.'s No. 11 Roberts, Lease 2, 990 ft. N and 2,188 ft. W of SE cor. Sec. 137, Blk. 29, W.&N.W. R.R. Sur. ... Drlg. 2,249 ft.
Cosden Oil Co.'s No. 6 Roberts-A, 200 ft. N and E of SW cor. Sec. 129, Blk. 29, W.&N.W.R.R. Sur. ... Shut down 1,456 ft.; sulphur water 1,433-46 ft.
Continental Oil Co.'s No. 7-C Chalk, 1,990 ft. S and 2,440 ft. W of NE cor. Sec. 140, Blk. 29, W.&N.W. R.R. Sur. ... Drlg. 1,676 ft.
Empire Gas & Fuel Co.'s No. 4 Clay, 330 ft. N and 2,310 ft. W of SE cor. Sec. 127, Blk. 29, W.&N.W.R.R. Sur. ... Drlg. 1,910 ft.; bailing 6 bbls. oil hourly.
Group No. 1 and Continental Oil Co.'s No. 2 Overton, 1,650 ft. from N and 2,310 ft. from E line of Sec. 5, Blk. 32, Twp. 2s, T.&P.R.R. Sur. ... Top pay 2,174 ft.; 200 ft. oil in hole; total depth 2,237 ft.; swabbed 50 bbls. hourly.
Group No. 1 and Continental Oil Co.'s No. 3 Overton, 990 ft. from N and 330 ft. from E line of Sec. 5, Blk. 32, Twp. 2s, T.&P.R.R. Sur. ... Preparing to drill deeper 2,274 ft.; swabbed 20 bbls. hourly.
McGinley-Sigler's No. 1 Hyman-B, 330 ft. S and W of NE cor. SW Sec. 89, Blk. 29, W.&N.W. Sur. ... 500,000 ft. sweet gas 1,241-50 ft.; total depth 1,600 ft.; salt water 1,465-70 ft.
McGinley-Sigler's No. 1 Hyman-C, 330 ft. N and 990 ft. W SE cor. Sec. 93, Blk. 29, W.&N.W.R.R. Sur. ... Location.
Merriwether's No. 1 Smith, 150 ft. from S, 2,490 ft. from W, Sec. 45, Blk. 33 ... Shut down 2,275 ft.;
Moody Oil Corp.'s No. 23-B Roberts, 990 ft. from N and W of Sec. 137, Blk. 29 ... Set 10-in. casing; shut down 261 ft.
Plymouth Oil Co.'s No. 4 Alrams, 330 ft. from N and 1,650 ft. from W, Sec. 5, Blk. 32, Twp. 2s ... Top pay 2,480 ft.; total depth 2,519 ft.; plugged back 2,505 ft.; pumped 20 bbls., 15 per cent water, in 24 hrs.; may shoot.
Simms Oil Co.'s No. 2 Clay, 330 ft. from S, 2,310 ft. from W, Sec. 127, Blk. 29 ... Oil show 1,570-80 ft.; drlg. 2,961 ft.
Ward Oil Co.'s No. 21 Roberts, 2,310 ft. N and 990 ft. E of SW cor. of Sec. 137, Blk. 29, W.&N.W.R.R. Sur. ... Top pay 2,520 ft.; total depth 2,575 ft.; shot 200 qts. 2,520-75 ft.; 600 ft. oil in hole; shot 200 qts. 1,835-65 ft.; cleaning out; to test.

HUDSPETH COUNTY

California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor., Sec. 19, Blk. E ... Drlg. 3,646 ft.
Western States Oil Co.'s No. 1 Moore, C SE Sec. 16, Blk. 71, Twp. 6, T.&P. Sur. ... Shut down 2,760 ft.
Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW, Sec. 12, Blk. 18 ... Fishing 3,155 ft.

IRION COUNTY

Beesley's No. 1 Sawyer Cattle Co., 1,320 ft. N and E of SW cor., Sec. 3,032, Blk. 24, H.&T.C.R.R. Sur. ... Set 6-in. casing 1,675 ft.; total depth 1,810 ft.; water 1,705-10 ft.; more water 1,730-40 ft.
Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W, Subd. 8 ... Shut down 1,105 ft.
Kingwood Oil Co. et al's No. 1 J. D. Suggs, SE NW SE, Sec. 19, Blk. 7, H.&T.C. Sur. ... Show gas 7,656 ft.; set 4½-in. casing 7,550 ft.; encountered 2,400 ft. sulphur water at 7,818 ft.; plugged back with lead wool to 7,718 ft.; plugged back with cement to 7,668 ft.; shot 20 qts. 7,645-68 ft.; no results; now plugging back to shoot upper shows
J. A. Starkweather's No. 1 Lindley, Sec. 1,160½, 900 ft. from S, 150 ft. from E, H.&T.C. Sur. on E ... Drlg. 2,072 ft.
P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County ... Drlg. 1,800 ft.

JONES COUNTY

Continental Oil Co.'s No. 1 Phillips, 440 ft. from S and 330 ft. from E of Phillips 80-ac. tract, Sec. 16, Blk. 19, T.&P. Sur. ... Shut down 3,082 ft.
Cosden-Herbert et al's No. 3 Bickley, 330 ft. N and W of SE cor. of S half NW, Sec. 50, Blk. 18 ... Rig.
Mid-Tex Oil & Gas Co.'s No. 1 King ... Shut down 1,590 ft.
Shabeen et al's No. 1 King ... 800 ft. fluid in hole; shut down 2,204 ft.; top pay 2,061 ft.; cleaning out after shot.
W. S. Ware's No. 2 Newman, 150 ft. from N and 2,090 ft. from E of Sec. 52, Blk. 18, T.&P.R.R. Sur. ... Drlg. 2,485 ft.

KENT COUNTY

California and Atlantic's No. 1 Wallace, 330 ft. from S and W. Sec. 60, Blk. G, W.&N.W.R.R. Sur. ... Shut down 3,003 ft.
White & Smith's No. 1 Pursley estate, 1,320 ft. from E and 2,640 ft. from S of Sec. 8, Blk. H, H.&T.B. Sur. ... Shut down 273 ft.

KIMBLE COUNTY

J. L. Bryant et al's No. 1 Lambert, 700 ft. from N and W line of F. Lotta Sur. ... Shut down 800 ft.
McLean & Jamison's No. 1 Cannon, 1,940 ft. N and 300 ft. W of SE cor. Robert Cochran Sur. ... Fishing 1,650 ft.

LOVING COUNTY

California Co.'s No. 1 Allen, 330 ft. from SE and SW of Sec. 90, Blk. 1, W.&N.W. Sur. ... Drlg. water well.
California Co.'s No. 1 Reagan & McElvain, 330 ft. SW of NE line and 330 ft. SE of NW line, Sec. 84, Blk. 1, W.&N.W.R.R. Sur. ... Cellar.
Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ... Cellar.
California Co.'s No. 1 Reagan et al, 330 ft. from NE and NW, Sec. 84, Blk. 1, W.&N.W. Sur. ... Moving in material.
Hadlock et al's No. 2 Russell, 1,650 ft. SW of NE line, 2,310 ft. NW of SE line, Sec. 80, Blk. 1, W.&N.W. R.R. Sur. ... Location.
Humble Oil & Ref. Co.'s No. 1 Kloh, 2,640 ft. N and W, Sec. 35, Blk. 55, Twp. 2, T.&P.R.R. Sur. ... Last salt 3,760 ft.; drlg. 3,905 ft.
Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. SW of NE line and 330 ft. NW of SE Sec. 92, Blk. 1, W.&N.W.R.R. Sur. ... Cellar.
Lockhart & Co.'s No. 2 fee, 676 ft. S, 330 ft. W, Sec. 91, Blk. 1, W.&N.W. Sur. ... Spudded 140 ft.; shut down.
Lockhart & Co.'s No. 3 Hubbard, 1,650 ft. from NE line, 330 ft. NW line of Sec. 83, Blk. 33, H.&T.C.R.R. Sur. ... Location.
Lockhart & Co.'s No. 5 Hubbard, 1,650 ft. SW of NE line and 330 ft. SE of NW line Sec. 83, Blk. 33, H.&T.C. ... Drlg. 2,610 ft.

LYNN COUNTY

Lubewell Oil Co.'s No. 1 May, 2,310 ft. S, 2,310 ft. W, Sec. 10, Blk. 7, E.L.R.R. Sur. ... Shut down 190 ft. for casing.
George McCamey's No. 1 Edwards, 165 ft. N and E, Sec. 5, Blk. 2, L.S.&W. Sur. ... Top salt 2,140 ft.; oil show 1,580-90 ft.; hole full sulphur water 4,730 ft.; set 6-in. casing 4,733 ft.; shut down 5,040 ft.

MENARD COUNTY

Priest & Duffey's No. 1 J. P. Sorrell, 550 ft. W and 250 ft. N of SE cor. Sec. 132, E.L.R.R. Sur. ... Drlg. 320 ft.
Cromwell & Duffey's No. 2 Winslow, 250 ft. S and E of NW cor. NE of NE, Sec. 36, J. H. Gibson Sur. ... Drlg. 1,065 ft.
I. C. Barnett's No. 2 Callan, Sec. 1, 1,050 ft. from S, 1,190 ft. W ... 2½ bbls. water hourly, 1,100,000 ft. gas, 1,268 ft.
Priest's No. 1 Sorrell, 250 ft. N and 550 ft. W of SE cor. Sec. 132, E.L.R.R. Sur. ... Location.

MIDLAND COUNTY

Pure Oil Co.'s No. 1 Hutt, 2,310 ft. from N and 330 ft. from E of Sec. 14, Blk. 38, Twp. 4s, T.&P. Sur. ... Location.

MITCHELL COUNTY

Magnolia Petroleum Co.'s No. 7 Mary Foster, 330 ft. from N and W line of Sec. 17, Blk. 29, Twp. 1s, T.&P.R.R. Sur. ... Drlg. 940 ft.
Morrison et al's No. 2 Morrison, 2,390 ft. from N and 660 ft. from E of Sec. 31, Blk. 28, Twp. 1n, T.&P. R.R. Sur. ... Standard rig.
Seiger's No. 1 Scott, C of NE of SW, Sec. 36, Blk. 17, S.P.R.R. Sur. ... Shut down 730 ft.
Teas & Wheeler's No. 1 Radford, 1,320 ft. N and W of Sec. 1, Blk. 27, T.&P. Sur. ... Cleaning out 4,820 ft.

NOLAN COUNTY

Gibson & Johnson's No. 1 Bond, 1,320 ft. from N and 1,980 ft. from E of Sec. 42, Blk. 20, T.&P. Sur. ... Shut down 3,240 ft.

PECOS COUNTY

Amerada Pet. Corp.'s No. 1-B University, 1,650 ft. from W and 990 ft. from S, Sec. 32, Blk. 16 ... Drlg. 750 ft.
Anderson et al's No. 1 McKenzie, 480 ft. from N and 330 ft. E of CNL Sec. 3, Blk. 604, G.C.&S.F. Sur. ... Location.
Atlantic O. P. Co.'s No. 1 Shearer, 330 ft. from NW and SW Sec. 107, Blk. 10, H.Y.N.R.R. Sur. ... Shut down 595 ft.
Black & Dittman's No. 1 Pecos Valley, 160 ft. from SW and SE lines, Sec. 34, Blk. 3, H.&T.C.R.R. Sur. ... Shut down 1,533 ft.; spraying 75 bbls. daily; gravity oil 32.5.
Bennett et al's No. 1 fee, 330 ft. W of CWL of Sec. 1, Blk. 119, G.C.&S.F. Sur., but in Sec. 8 ... Location.
Cardinal Oil Co.'s No. 1 Tippett-Pure, 150 ft. N and 185 ft. west of most southerly SE cor. Sec. 1, D. F. Robertson Sur. ... Location.
Cardinal Oil Co.'s No. 6 Torborg, 450 ft. N and 150 ft. W of SE cor. W half Sec. 539, Arnold & Barrett Sur. A-3 ... Drlg. 295 ft.
Continental Oil Co.'s No. 6 University, 330 ft. S and 3,031 ft. E of NW cor. of Sec. 6, Blk. 17, University Land ... Cellar.
E. W. Bateman et al's No. 1 Cordova, 3,490 ft. from N and 1,515 ft. from W, Sec. 29, Blk. 11, H.&G.N.R.R. Sur. ... Shut down 1,826 ft.
Cosby Prod. & Ref. Co.'s No. 1 Cordova, 330 ft. from N and E of S 320 ac., Sec. 11, Blk. 11, H.&G.N. Sur. ... Location.
Cosden Oil Co.'s No. 1 McDonald, 350 ft. from N and E of Sec. 1, H.E.&W.T. Sur. ... Flowing water 1,645 ft.; shut down 2,016 ft.
Cowboy Evans' No. 1 Pecos Valley, 1,307 ft. from SE line, 907 ft. from SW line to Sec. 36, Blk. 3, H.&T.C.R.R. Sur. ... Location.
Cromwell et al's No. 1 University, 1,980 ft. from S and 1,320 ft. from E, Sec. 16, Blk. 16 ... Location.
Dixie Oil Co.'s No. 1 McKinzie, 3,300 ft. from N and 2,025 ft. from W of Sec. 15, Blk. 604, G.C.&S.F. ... Drlg. 1,720 ft.
Dixie Oil Co.'s No. 1 Toborg, 150 ft. from SW line of E half of Sec. 539, Arnold & Barrett Sur. ... Total depth 440 ft.; top pay 325 ft.; swabbing 95 bbls. daily.
Dixie Oil Co.'s No. 2 Torborg, 450 ft. N, 150 ft. E of SW cor. E half Sec. 539, Arnold & Barrett Sur. ... Location.
A. M. Griffith's No. 1 Ferrenbach et al, 2,112 ft. from W line, 1,320 ft. from S line, Sec. 9, Blk. 603, G.C.&S.F. Sur. ... Shut down 1,860 ft.
Galt-Brown's No. 1 Thompson, 660 ft. from S and 1,100 ft. from E Sec. 71, Blk. 194, G.C.&S.F. Sur. ... Location.
Humble Oil & Ref. Co.'s No. 2 Cunningham, 2,640 ft. from N, 330 ft. from W line of Sec. 48, Blk. 11, H.&G.N.R.R. Sur. ... Drlg. 1,470 ft.
Hussman Oil Co.'s No. 1 Esters, 960 ft. from N and 300 ft. E, Sec. 82, Blk. OW, T.M.R.R. Sur. ... Shut down 1,235 ft.
I. L. Kennedy's No. 1 Roberts, C of Sec. 78, Blk. 3, T.&P.R.R. Sur. ... Shut down 3,105 ft.
Landreth Prod. and Henshaw Bros.' No. 1-E University, 330 ft. N and W of SE cor. W half NE, Sec. 13, Blk. 18, University Land ... Waiting on cement to set 8¼-in. casing 950 ft.

Landreth Prod. and Henshaw Bros.' No. 2-I University, 330 ft. S and W of NE, Sec. 24, Blk. 18, University Land ..... Cellar.
Martin A. Meyer et al's (formerly Mauch & Kroger) No. 1 Holmes, S half SW Sec. 5, Blk. 178, T.C. Sur. ..... Drlg. 1,820 ft.
R. E. Moore's No. 1 Arnold, 1,320 ft. from S and 660 ft. from E lines of Sec. 18, Blk. 1, H.&T.C.R.R. Sur. .... Show oil 1,216 ft.; show oil 1,402 ft.; pulling 8-in. casing; shut down 1,615 ft.

Mid-Kansas Oil & Gas Co.'s No. 8 M. A. Smith, 250 ft. N and 1,005 ft. W of NE cor., Sec. 21, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 1,605 ft.
J. D. O'Mara's No. 1 Bennett, Sec. 592, 1,460 ft. from S, 150 ft. from E, G.C.&S.F. Sur. ..... Cleaning out 875 ft.
J. D. O'Mara's No. 1 Streety, C of Sec. 1, W. C. Howard Sur. ..... Show oil 1,785 ft.; total depth 1,825 ft.

Pecos Crude Oil Pur. Co.'s No. 4 Pecos Valley, 770 ft. from SW and 1,320 ft. from SE of W, Sec. 22, Blk. 10, H.&G.N.R.R. Sur. ..... Top salt 935 ft.; top pay 1,622 ft.; shot 60 qts. 1,638-50 ft.; total depth 1,650 ft.

Peren Oil Co.'s No. 2 Eaton, C of E of W, Sec. 27, Blk. 3, H.&T.C.R.R. Sur. ..... Location.
M. M. Rowan's No. 1 University, NE, Sec. 25, Blk. 16 .... Total depth 2,490 ft.; plugged back 1,815 ft.; machine moved off.

Phillips Pet. Co.'s No. 3 Monroe, 3,860 ft. from N and 660 ft. from E Sec. 39, Blk. 194, G.C.&S.F. ..... Cellar.
Phillips Pet. Co.'s No. 5 Ramsey, 330 ft. from N and 1,650 ft. from W of Sec. 17, Blk. 194 ..... Drlg. by tools 355 ft.

Southern Crude Oil Pur. Co.'s No. 1 McKenzie, Sec. 10, Blk. 604 ..... Hole full sulphur water 775 ft.; total depth 965 ft.; running 10-in. casing.

Shell Pet. Corp.'s No. 1 Percival, 330 ft. from N and E of SE, Sec. 199, Blk. 3, I.&G.N. Sur. ..... Location.
Shell Pet. Corp.'s No. 1-D University, 1,650 ft. from E and 990 ft. from W of Sec. 32, Blk. 16 ..... Drlg. 625 ft.
Shell Pet. Corp.'s No. 2-B Smith, 1,006 ft. S and 330 ft. W of NE cor. Sec. 24, Blk. 194, G.C.&S.F.R.R. Sur. ..... Rigging up.
Shell Pet. Corp.'s No. 5 Smith-D, 990 ft. N and W of SE cor. of Sec. 24, Blk. 194, G.C.&S.F.R.R. Sur. .... Drlg. by tools 435 ft.
Sides & Cloyd's No. 2 Blackstone & Slaughter, C NW of Sec. 34, Blk. A-2, T.&C.R.R. Sur. ..... Drlg. 570 ft.
Simms Pet. Co.'s No. 1 University, 1,650 ft. N and 330 ft. W of SE cor. Sec. 21, Blk. 19, University Land .... Drlg. 510 ft.
Skelly Oil Co.'s No. 1 Bowers, SW cor. N half SE. Sec. 31 Blk. 16 ..... Initial production 58 bbls. 1,649-50 ft.; swabbed 45 bbls. day; total depth 1,676 ft.; plugged back to 1,670 ft.; to clean out and pump.

Skelly Oil Co.'s No. 2 University-Bower, 330 ft. S and E of NW cor. of SE Sec. 31, Blk. 16, University ..... Location.
Transcontinental Oil Co.'s No. 1 University ..... Drlg. 4,879 ft.

Transcontinental and Arkansas' No. 2 Matthews, 1,060 ft. from E and 330 ft. from N line of SE Sec. 10, Blk. 194, G.C.&S.F.R.R. Sur. ..... Location.
Transcontinental and Arkansas Fuel Oil Co.'s No. 1-A Smith, 2,310 ft. from N and 1,290 ft. from E of Sec. 11, Blk. 194, G.C.&S.F. Sur. ..... Location.
Transcontinental Oil Co. et al's No. 2 Sellman, 990 ft. from N and 2,310 ft. from E of Sec. 8, Blk. Z, T.C. Sur. ..... Drlg. 565 ft.
Transcontinental Oil Co.'s No. 1 Smith, 2,310 ft. from N and 1,060 ft. from E of Sec. 10, Blk. 194, G.C.& S.F.R.R. Sur. ..... Location.
Trees Oil Co.'s No. 3 Trees, 330 ft. from S and W of Sec. 90, Blk. 8, H.&G.N. Sur. ..... Total depth 1,423 ft.; hole full sulphur water 1,305-12 ft.

World Oil Co.'s No. 2 University, Sec. 31, Blk. 16, 330 ft. from N, 2,310 ft. E ..... Total depth 1,659 ft.; show oil 1,642-45 ft.; water 1,654 ft.; to plug back to 1,620 ft. and test; 1,400 ft. sulphur water in hole 1,659 ft.

World Oil Co.'s No. 1-C University, 1,650 ft. from N. 990 ft. W. Sec. 7, Blk. 20, University Land ..... Set 10-in. casing 753 ft.; drlg. 1,680 ft.

PRESIDIO COUNTY

Eastland Oil Co.'s No. 1 Tootle, C Sec. 17, Blk. 1, D.P. R.R. Sur. ..... Spudded; shut down.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor., Sec. 1, Blk. 2, University Land.. Top pay 2,903 ft.; 1,000 ft. fluid in hole; top pay 6,807 ft.; drlg. 8,383 ft., sandy lime.

Big Lake Oil Co.'s No. 4-C University, 1,120 ft. from N and 1,096 ft. from E of Sec. 1, Blk. 2 ..... Showing oil and gas at 8,220 ft.; total depth 8,220 ft.; flowed an average 176 bbls. daily; set 5 3/16-in. casing 7,837 ft.

Texon Oil & Land Co.'s No. 2-B University, 4,655 ft. from S, 250 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 5,521 ft.
Texon Oil & Land Co.'s No. 3-B University, 2,240 ft. from S, 920 ft. from W, Sec. 36, Blk. 9 ..... Total depth 3,348 ft.; sem. casing.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Shut down 2,990 ft.
E. T. Hansford's No. 1 Williams, 150 ft. from S and W. Sec. 17, Blk. 6, H.&G.N. Sur. ..... Shut down 380 ft.
Black & Fink's No. 1 Brooks, 1,980 ft. N and 660 ft. W Sec. 16, Blk. 59 ..... Drlg. 965 ft.
Southern Crude Oil Pur. Co.'s No. 1 Kioh-Rumsey, 2,310 ft. N and W SE cor., Sec. 23, Blk. 51 ..... Show oil 3,410-20 ft.; shut down 3,575 ft.

David R. Thompson's No. 1 A. A. Eddins, Sec. 9, Blk. C-1 ..... Shut down 5,658 ft.

RUNNELS COUNTY

Gibson & Johnson's No. 1 Johnson, 2,310 ft. N and 1,650 ft. W of SE cor., Sec. 150, E.T.R.R. Sur. ..... Drlg. 680 ft.
Gibson & Johnson's No. 2 Serratt, 2,310 ft. from S and 1,650 ft. from E of Sec. 150, E.T.R.R. Sur. ..... Derrick.
George W. Boyce's No. 1 Lang, 2,310 ft. N, 6,900 ft. E, Sec. 262 ..... Cleaning out 1,780 ft.
McLean's No. 1 Clayton, 150 ft. from N line, 270 ft. from W line of Sec. 133 ..... Shut down 1,185 ft.

SCHLEICHER COUNTY

Delmar Oil Co.'s No. 1 O'Harrow, C of NW, Sec. 56, Blk. 1, G.H.&S.A.R.R. Sur. ..... Drlg. 2,310 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W, Sec. 35, Blk. LL, T.C.R.R. Sur. ..... Cementing cave 5,910 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,470 ft. from W, G.H.&S.A.R.R. Sur. ..... Fishing 2,270 ft.

SCURRY COUNTY

Byrd & Harmon's No. 1 Murphy, Jr., 330 ft. from N and E of Sec. 114, Blk. 97, H.&T.C. Sur. ..... Shut down 1,732 ft.
Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E, Sec. 12, Blk. 3, H.&T.C.R.R. Sur. ..... Est. 200,000 ft. gas 3,775 ft.; cleaning out 3,810 ft.

I. B. Mimms et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C.R.R. Sur. ..... Spudded and shut down 300 ft.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Cleaning out 4,325 ft.

E. L. Smith Oil Co.'s No. 1 Moore, 1,320 ft. from S and W, Sec. 379, Blk. 97 ..... Top salt 750 ft.; encountered 500,000 ft. gas 1,510 ft.; oil show 2,215 ft.; drlg. 3,965 ft.

Transcontinental Oil Co.'s No. 1 Peckham, 330 ft. from S and W of R. N. Miller Sur. ..... Drlg. 375 ft.

SUTTON COUNTY

Independent Oil & Gas Co.'s No. 1 Willson, Sec. 30, Blk. A, 1,650 ft. from N, 2,310 ft. from W ..... Location.

TAYLOR COUNTY

Condor Pet. Co.'s No. 1 Allen, C of NW, Sec. 220, Blk. 64, H.T.C.R.R. Sur. ..... Drlg. 550 ft.
A. H. Gibson et al's No. 1 Cody, 888 ft. N and 160 ft. W of SE cor. Lot 2, Sec. 18, Guadalupe County School Land ..... Location.
Gibson & Johnson's No. 1 Bingham, 330 ft. N and E of SW cor. their 270.8-ac. tract, Sec. 31, Guadalupe County School Land ..... Location.
John B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor., Sec. 46, Lunatic Asylum Land ..... Show oil 4,917 ft.; shut down 5,338 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW, Sec. 155, Blk. D, M.-K.-T.R.R. Sur. ..... Shut down 1,285 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... Drlg. 3,135 ft.
Mrs. J. B. McPhee's No. 1 Sam Belt, C Sec. 78, Blk. D-7, E.L.R.R. Sur. ..... Shut down 880 ft.
Transcontinental Oil Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F.R.R. Sur. ..... Drlg. 1,960 ft.
Woodley & Jones' No. 1 Pankenham, C SE NW, Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Shut down 610 ft.

TERRY COUNTY

Atlantic et al's No. 1 Carlisle, 990 ft. from S and E of Sec. 58, Blk. E, E.L.&R.R. Sur. ..... Location.
Kingsland Oil Prod. Co.'s No. 1 Brownfield, C NW SW SW, Sec. 7, Blk. 1-A, E.L.R.R. Sur. ..... Fishing bailer 5,080 ft.

TOM GREEN COUNTY

Cannon et al's No. 1 Rust, 990 ft. S, 990 ft. W of NE cor. of Sec. 745 ..... Location.
Ellis et al's No. 1 Lewis, 450 ft. S and 150 ft. E of SE cor. of J.W. Sur. in Albert Black Sur., Sec. 75 ..... Show oil 428-43 ft.; shot 20 qts. 428-40 ft.; no results.

Fitzgerald & Taliaferro's No. 1 Bennett, C SW, Sec. 1,628, E. F. Ringer ..... Total depth 2,447 ft.; plugged back to 2,405 ft. to straighten hole.

E. W. Wiley et al's No. 1 Maier, 200 ft. from E, 110 ft. from N, Sec. 6, Blind Asylum Land ..... Total depth 420 ft.; underreaming 10-in. casing; show oil 418-20 ft.

UPTON COUNTY

Eppenauer Drlg. Co.'s No. 1 Chaney, 2,310 ft. from N and 330 ft. from W of Sec. 18, Blk. 3, M.-K.-T. Sur.. Location.
Gulf Prod. Co.'s No. 3-B Hughes, 160 ft. N and 161 ft. W of most southerly SE cor. of their 200-ac. lease "B" out of Wm. Teer Sur. ..... Rig.
Pure Oil Co.'s No. 3 Hughes, 150 ft. S and 767 ft. E of NW of their 300 ac., Sec. 4, Wm. Teer Sur. ..... Partly rigged up; shut down 610 ft.

T. P. Coal & Oil Co.'s No. 1 Belcher, 1,320 ft. from N and 2,310 ft. from W line, Sec. 10, Blk. 4½, G.C.& S.F.R.R. Sur. ..... Drlg. 625 ft.
T. P. Coal & Oil Co.'s No. 1 Reese, 330 ft. from N and E line, Sec. 2, Blk. 3 ..... Top salt 910 ft.; top pay 2,480 ft.; swabbed 170 bbls. 15 hrs.; total depth 2,547 ft.

VAL VERDE COUNTY

Independent Operators' No. 1 Whitehead, SE SE Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 4,850 ft.
O. O. Owen's No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125-700 ft. gas; shut down 5,727 ft.

Phantom Oil Co.'s No. 1 Ingram, 175 ft. W of E line and 300 ft. N of S line, Sec. 44, Blk. D-8, E.L.&R.R. Sur.. Show oil 1,535 ft.; hole full water 2,520 ft.; underreaming 10-in. casing 2,545 ft.

Valvert Oil Corp.'s No. 1 Bassett, C NE, Sec. 47, Blk. Y.. Shut down 4,009 ft.

WARD COUNTY

Alpine Oil & Gas Co.'s No. 1 Dakan, 228 ft. from NE and 150 ft. from SE line, Tract 8, Sec. 11, Blk. 5, H.&T.C. Sur. ..... 1,000 ft. oil in hole; top pay 2,148 ft.; total depth 2,210 ft.; swabbing 30 bbls. per day; preparing to put on pump.

E. J. Anderson's No. 1 Johnson, 150 ft. N, 345 ft. E, Sec. 7, Blk. 32, H.&T.C.R.R. Sur. ..... Top salt 815 ft.; total depth 2,183 ft.; top pay 2,155 ft. swabbing 20 bbls. per day; set 6⅝-in. casing 2,024 ft.

Atlantic et al's No. 1 Dorr, 1,730 ft. S, 990 ft. W, Sec. 2, J. Howe Sur. ..... Underreaming 8-in. casing 1,250 ft.; cleaning out 1,705 ft.

Atlantic and Delmar's No. 1 Hayzlett, 1,650 ft. from NE and NW of Sec. 17, Blk. 5 ..... Location.
Gulf Prod. Co.'s No. 3 Hutchins, 2,310 ft. from N and 330 ft. from W, Sec. 1, Blk. F, G.M.M.B.&A. Sur. .... Top salt 1,035 ft.; top brown lime 2,310 ft.; increase in gas 2,608-10 ft.; show oil 2,685 ft.

Gulf Prod. Co.'s No. 7 O'Brien, 320 ft. Sand W, Sec. 22, Blk. F, G.M.M.B.&A. Sur. ..... Hole full sulphur water 3,408 ft.; slopped over casing; drlg. 3,510 ft.; flowing sulphur water.

Gulf Prod. Co.'s No. 3 Wristen Bros., 220 ft. NE of SW and 220 ft. SE of NW, Sec. 18, Blk. 5, H.&T.C. Sur. .. Show gas 1,960-70 ft.; filling up with sulphur water 2,520-27 ft.; salt water at 2,545 ft.; shut down.

Tex-Oil Production Co.'s No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 152, Blk. 34, H.&T.C.R.R. Sur. ..... Show gas 2,806-09 ft.; shot 30 qts. 3,245-75 ft.; drlg. 3,660 ft.; shot 120 qts. from 3,240-75 ft.; drlg. 4,210 ft.

Penn and Atlantic's No. 2 Bennett, 2,310 ft. S line, 1,650 ft. W line, Sec. 16, Blk. 34, H.&T.C.R.R. Sur. ..... Drlg. 2,576 ft.; top pay 2,347 ft.
Penn and Atlantic's No. 1 Cooper, 330 ft. from NE and 990 ft. from NW of Sec. 43, Blk. 34, H.&T.C. Sur. ... Bailing 6 bailers water, 5 bailers oil; show oil 2,657 ft.; total depth 2,880 ft.; setting 6⅝-in. casing 2,480 ft.

Richardson et al's No. 1 O'Brien et al, 332 ft. from N and 360 ft. from W Sec. 5, Blk. F, G.M.M.B.&A. Sur.. Location.
Shell Pet. Corp.'s No. 1 Owens, located NE cor. of Sec. 16, Blk. 15, H.&T.C.R.R. Sur. ..... Top pay 2,886-93 ft.; increase at 2,909 ft. and 3,023-32 ft.; shot 90 quarts from 2,473-93 ft.; increase in oil 3,022-32 ft.; drlg. 3,920 ft.

Shipley et al's No. 4 Hayzlett, 2,050 ft. NW of SE and 2,420 ft. NE of SW line of Sec. 17, Blk. 5, H.&T.C. R.R. Sur. ..... Top salt 720 ft.; shut down 2,546 ft.; plugged back 2,538 ft.; shot 90 qts. from 2,473-93 ft.; mudded and shut down.

Shipley et al's No. 5 Hayzlett, assume common line Secs. 16 and 17 is N and S. 220 ft. S and 1,910 ft. W. Sec. 17, Blk. 5 ..... Standard rig.

Complete Oil Storage Protection Against *Evaporation . . Fire . . Corrosion*

Wiggins Roofs are making not one but a number of savings for oil companies all over the world. The completeness in which they stop oil storage losses is not possible with any other single method.

Complete Evaporation Protection

While other devices save some of the oil vapor which escapes from tanks by breathing and during filling and emptying, Wiggins Roofs *prevent* practically all loss. This is accomplished without operating expense, by removing the conditions under which evaporation takes place.

Complete Fire Protection

Fire tests which oil companies have made on Wiggins Roofs prove their effectiveness in preventing fire. Of consequence, too, is the fact that no tank protected by a Wiggins Roof has ever been a fire loss. And fire protection, like evaporation saving, is accomplished without operating expense or costly accessory equipment.

Reduce Corrosion

Wiggins Roofs make another oil storage saving by reducing corrosion when sour oil is encountered. Wiggins Floating Roofs ride directly on the oil and the corrosion of the under side of the deck is no greater than on the tank shell below the oil line. Wiggins Breather Roofs are also operated with the oil in contact with the roof, eliminating the possibility of corrosive gases attacking the steel plating.

Put on New or Existing Tanks

Wiggins Roofs may be installed on any new or existing tank in good condition. Ask our nearest office for quotations on these roofs, oil storage tanks or any other equipment shown in our list of products.

Oil Storage Tanks
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Rundown Tanks
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Cylindrical Tanks*
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Pressure Tanks
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Absorbers
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Refinery Equipment

**Cylindrical tanks fabricated at Birmingham plant only.*

CHICAGO BRIDGE & IRON WORKS

Dallas . . . 3341 Magnolia Bldg.
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Chicago . . 2128 Old Colony Bldg.
San Francisco . . 1054 Rialto Bldg.
Cleveland . . 2204 Union Trust Bldg.
New York . . 3147 Hudson Terminal
Detroit . . . 1514 Lafayette Bldg.
Philadelphia . . 1615 Jefferson Bldg.
Boston . 1517 Consolidated Gas Bldg.

WIGGINS ROOFS
Stop EVAPORATION LOSSES

Shipley et al's No. 1 Monroe, 330 ft. SE SW, Sec. 3, Blk. 1 ..... Preparing to resume drilling 385 ft.

J. E. Smith's No. 1 Clement, 153 ft. SW of NE line and 153 ft. SE of NW line, Lot 7, Sec. 7, Blk. 32, H.&T.C.R.R. ..... Location.

Southern Crude Oil Purch. Co.'s No. 1 Harris, 1,458 ft. from N and 1,406 ft. from E of Sec. 30, Blk. B-19 ... Cem. 12½-in. casing 663 ft.

Sturm & Paine's No. 1 Cummins, 748 ft. from NE and 155 ft. from NW of Sec. 7, Blk. 32, H.&T.C.R.R. Sur... Shut down 2,350 ft.; show oil and gas 2,170 ft.

Sun Oil Co.'s No. 2 Sealy, 330 ft. from N and E of Sec. 88, Blk. F, G.M.M.B.&A. Sur. ..... Underreaming 6⅝-in. casing 2,128 ft.

Trans-Pecos Oil Co.'s No. 1 Lingnecker, C W of N Sec. 206, Blk. 34, T.C.R.R. Sur. ..... Location.

WINKLER COUNTY

A. W. Phillips' No. 2 Brown et al, 2,000 ft. S and W of NE, Sec. 4, Blk. B-5, Public School Land ..... Top salt 1,300 ft.; shut down 2,832 ft.; show oil 2,775-85 ft.

Bashara et al's No. 2 Bashara, 990 ft. from S, 2,310 ft. from E, Sec. 17, Blk. B-3, Public School Land ..... Top brown lime 2,306 ft.; top white lime 3,008 ft.; 40,000,000 ft. gas at 3,030 ft.; flowed 37 bbls. daily through 2½-in. tubing.

Cinderella Syndicate's No. 1 Hendricks, 330 ft. N, 1,650 ft. W, Sec. 42, Blk. 26, Public School Land ..... Total depth 150 ft.; rig.

Humble Oil & Ref. Co.'s No. 3 Wahon-B, 2,310 ft. S and W of NE cor. Sec. 47, Blk. 26, School Land ..... Total depth 123 ft., red rock; cem. 12½-in. casing 117 ft.

Liner Drlg. Co.'s No. 1 Campbell, 330 ft. from N and E cor., Sec. 2, Blk. B-5 ..... Top brown lime 2,510 ft.; shut down 3,685 ft.

Shell and The Texas Company's No. 1-B Cowden, 660 ft. from S and W of Sec. 39, Blk. B-5, Public School Land ..... Drlg. 700 ft., red rock.

Sun Oil Co.'s No. 1 Sealy, 2,310 ft. N line, 330 ft. from W line, Sec. 52, Blk. F, C.M.M.B.&A. Sur. ..... Run 8¼-in. casing 1,530 ft.; drlg. 2,323 ft., red rock.

OKLAHOMA FIELDS

(Continued from Page 80)

Company, farm—	S.T.R.	Wells	Prod.
Johnson	18-9-7	3	526
Continental-Sinclair:			
Perry	18-9-7	3	609
Devonian:			
Harjo	18-9-7	1	9
Gypsy:			
Harjo	18-9-7	2	210
Magnolia:			
Drewery	18-9-7	2	Off
Prairie:			
Stubbs	18-9-7	3	383
Shaffer:			
Hangler	19-9-7	1	Off
Sinclair:			
Coody, B.	18-9-7	3	442
Coody, D.	17-9-7	1	25
Johnson, G.	18-9-7	1	105
Johnson "B"	18-9-7	1	60
Thompson "B"	18-9-7	2	1,364
Sinclair-Continental:			
Warrior, J.	17-9-7	2	30
Sinclair-Gypsy:			
Okfuskee	18-9-7	1	125
Sinclair-Phillips:			
Warrior, S.	17-9-7	2	60
Total		31	4,118

Searight Pool

Company, farm—	S.T.R.	Wells	Prod.
Amerada:			
Johnson	4- 9-6	1	17
Nicey	3- 9-6	1	2
Strothers	3- 9-6	2	85
Barnsdall:			
Jackson	5- 9-6	2	15
Johnson	22-10-6	1	19
Burke-Greis et al:			
Nevins	32-10-6	2	739
Varnum	32-10-6	1	252
Carter:			
Davis	4- 9-6	2	52
Frazier	3- 9-6	3	19
Kiker	2- 9-6	1	17
Mandler	3- 9-6	2	5
Scott	26-10-6	1	10
Amerada (Comm.)	11- 9-6	1	9
I.T.I.O. (Comm.)	11- 9-6	1	187
Mayhue (Comm.)	11- 9-6	3	1,304
McMan (Comm.)	11- 9-6	1	142
Skiff (Comm.)	10- 9-6	1	23
Slick (Comm.)	11- 9-6	2	360
Stewart (Comm.)	10- 9-6	1	133
Strothers (Comm.)	11- 9-6	3	397
Gypsy:			
Cudjo, M.	4- 9-6	3	495
Nevins	32-10-6	2	301
Saloche	31-10-6	1	49
Magnolia:			
Varnum	32-10-6	3	328
Varnum, W. F.	5- 9-6	1	21
Mid-Continent:			
Grayson	34-10-6	4	24
Saloche	33-10-6	5	197
Mid-Continent-Homaokla:			
Nevins	32-10-6	4	416
Papoose:			
Marks	32-10-6	1	155
Pine, W. B.:			
Lulu	4- 9-6	1	45
Prairie:			
Cannon	33-10-6	1	1
Carter, J.	10- 9-6	1	1
Hauck	33-10-6	1	2
Hurford	32-10-6	1	13
Kinkaid	33-10-6	2	36
Weimer	22-10-6	1	10
Pure:			
Aldridge	3- 9-6	3	513
Shell:			
Crump	32-10-6	1	20
Strothers	3- 9-6	3	82
Sinclair:			
Nevins	5- 9-6	1	407
Polly	3- 9-6	4	1,055
Superior:			
Varnum	4- 9-6	1	15
Texas:			
Fleet	4- 9-6	1	15
Twin State:			
Varnum	4- 9-6	2	86
Wilcox:			
Chupco	4- 9-6	6	170
Total		86	8,224

PRODUCTION IN ST. LOUIS POOL

Daily average production of the St. Louis Pool for the week ending February 17:

St. Louis Pool

Company, farm—	S.T.R.	Wells	Prod.
Amerada:			
Richardson	16-7-4	2	61
Atlantic et al:			
Bass	9-7-4	1	99
Bourassa (Stand)	10-7-4	1	75
Burke	16-7-4	3	224
Milburn	15-7-4	1	75
McGee	4-7-4	1	291
Barnsdall:			
Stahl	30-7-5	3	209
Blackwell:			
Cherry	25-7-4	3	193
Lewis	24-7-4	2	77
British-American:			
Coley	24-7-4	2	68
McGee	23-7-4	6	115
Continental et al:			
Brandenburg	34-8-4	1	286
Darby:			
Bettis	21-7-4	1	59
Harber	23-7-4	1	21
Nixon	9-7-4	2	170
Youngblood	16-7-4	4	183
Darby-Atlantic:			
Cardwell	15-7-4	1	242
Empire:			
Bettis	17-7-4	1	65
Jackson	36-8-4	1	175
State	36-7-4	1	95
Gypsy:			
Bruno	25-7-4	3	47
Collins	25-7-4	4	353
Dodson	26-7-4	4	35
Duvall	3-7-4	1	433
Green	17-7-4	6	2,781
Johnson	29-7-5	1	58
LeClair	23-7-4	4	604
Rosemond	26-7-4	4	348
Stahl	30-7-5	4	77
Swartz	2-7-4	1	18
Gypsy et al:			
Johnson, W.	7-7-4	1	66
Healdton:			
Hines	17-7-4	1	46
Home Gas Co.:			
St. Louis	14-7-4	1	187
Houston Oil:			
Wyatt	17-7-4	5	555
Independent:			
Barrow	1-7-4	3	388
Blandin	30-7-5	5	704
Youts	19-7-5	8	1,319
Independent-Darby:			
Brown	14-7-4	2	8
Davis	15-7-4	2	45
Freid	23-7-4	2	50
Jordon	10-7-4	1	21
LeClair	23-7-4	1	59
Pappan	16-7-4	3	298
Pillar	15-7-4	1	5
Standridge	14-7-4	3	13
Wallace	14-7-4	4	55
Independent et al:			
Hamby	14-7-4	2	16
Was	30-7-5	1	21
Independent-Mid-Kansas:			
Asher	3-7-4	1	Off
Weldfelt	2-7-4	3	495
Independent-Range:			
Null	35-8-4	2	172
Independent-Skelly:			
James	17-7-4	2	116
Independent-Westland:			
Booze	9-7-4	1	28
Rhodd	16-7-4	3	363
I. T. I. O.:			
Brandenburg	35-8-4	2	2,283
McGee	26-7-4	1	105
Shobe	35-8-4	4	130
Weams	21-7-5	1	60
Weldfelt	2-7-4	3	843
I. T. I. O.-Sinclair:			
Woodard	18-7-5	1	27
Keister-Manning:			
Kelly	2-7-4	3	384
Magnolia:			
Anderson	1-7-4	1	1
Banta	14-7-4	3	203
Billington, C.	11-7-4	1	Off
Billington, E.	22-7-4	1	494
Brandenburg	18-7-5	5	955
Bullock	18-7-5	1	1
Caudle	13-7-4	2	59
Cherry "A"	26-7-4	5	209
Cherry "B"	26-7-4	3	30
Cherry, J. H.	13-7-4	1	30
Clour	11-7-4	2	11
Davis, C. E.	24-7-4	1	7
Davis, Frank	15-7-4	2	12
Engle	34-7-4	1	40
Fyke, George "A"	20-7-5	1	106
Fyke, George "B"	20-7-5	2	201
Fyke, L. L.	20-7-5	1	5
Fyke, Tulle "A"	20-7-5	1	79
Fyke, Tulle "B"	20-7-5	2	227
Fyke, Tulle "C"	20-7-5	1	27
Fyke, Tulle "D"	20-7-5	2	193
Fyke, Tulle "E"	28-7-5	1	10
Green, B. M.	13-7-4	1	4
Green, Lulla	13-7-4	1	52
Quinn	20-7-5	1	30
Harden	12-7-4	2	125
Hatcock, C. D.	11-7-4	1	7
Hatcock, Lee	11-7-4	1	67
Harper, J. J.	19-7-5	1	8
Harper, James	19-7-5	2	3
Hembree	19-7-5	4	66
Hilton, J. E.	22-7-4	2	1,035
Hilton, Maud	22-7-4	1	Off
Jones "A"	18-7-4	1	71
James, M.	8-7-4	2	10
Jordan	12-7-4	1	34
Kiner	17-7-5	1	2
Latimer	17-7-4	2	126
Louis, J. L.	15-7-4	1	3
Lynn, D.	21-7-4	1	450
Lynn, F.	21-7-4	2	125
Mull	15-7-4	2	Off
Nicklass	31-7-5	2	70
Nona	11-7-4	1	28
Ogle	22-7-4	1	26
Richardson	15-7-4	2	228
Risenhoover	14-7-4	4	10
Robbins, J. M.	15-7-4	4	121
Robbins, Pearl	15-7-4	1	37
Rowe, I.	18-7-5	1	18
Rowe, M.	18-7-5	1	4
Shipshewano	19-7-5	4	60
Singletary, D.	13-7-4	1	3
Singletary, F.	23-7-4	3	11
Singletary, T.	14-7-4	3	25
Tartar	15-7-4	2	794
Vieux, F.	13-7-4	1	7
Vieux, N.	13-7-4	1	1
White, Roy	20-7-5	1	6
Wilborn, Mary	24-7-4	2	264
Wilborn, S. A.	24-7-4	6	555
Willamette	11-7-4	1	17
Youts, Charles	20-7-5	5	276
Youts, C. A.	19-7-5	4	200
Youts, H. E.	20-7-5	7	348
Magnolia-Pierce:			
Hubanks	17-7-4	2	551
McCulloch et al:			
Bruno	25-7-4	5	751
Smith	25-7-4	6	733
Mid-Continent:			
Decker	8-7-4	1	40
Guinn	20-7-5	1	18
Robbins	9-7-4	2	16
Mid-Kansas:			
Getzelman	25-7-4	4	502
Lunay	30-7-5	3	244
Minnehoma:			
Simms	16-7-4	3	170
Packard:			
Church	29-7-5	1	310
Panther:			
Town Lot	14-7-4	1	24
Town Lot	23-7-4	1	Off
Phillips:			
Cherry	25-7-4	2	75
Grace	2-7-4	1	35
Lydick	24-7-4	1	15
Stahl	30-7-5	4	150
Prairie:			
Bodkins	26-8-4	1	28
Deatherage	28-7-4	1	9
Desmond	25-7-4	4	52
Ellison	25-7-4	4	379
Gammon	30-7-5	8	2,642
Hembree, A. O.	19-7-5	4	838
Hembree	18-7-5	1	11
Linn	30-7-5	4	266
Meyer	32-7-4	1	49
McGee	4-7-4	1	481
Smith	30-7-5	3	28
Wolf	29-7-5	4	489
Youts	19-7-5	4	124
Prairie et al:			
Davis	18-7-5	4	36
Nesbit	18-7-5	2	128
Pugh	7-7-5	1	10
Prairie-Shaffer-Independent:			
Cummings	17-7-4	2	92
Reagan	17-7-4	3	916
Rice	17-7-4	2	65
Pure:			
Brandenburg	21-7-4	1	203
Dodson	26-7-4	2	106
Duval	4-7-4	1	Off
Pure et al:			
Latimer	21-7-4	1	115
Thomas	26-7-4	4	496
Thrilkill	19-7-5	1	47
Tolen	1-7-4	1	67
Shaffer O. & R.:			
Cherry	25-7-4	4	154
Tolen	30-7-5	4	299
Shell:			
Hines	22-7-4	1	116
Smith	21-7-5	1	45
Stahl	30-7-5	1	27
Younts	28-7-5	1	36
Sinclair:			
Blandin	24-7-4	13	1,109
Brandenburg	7-7-5	3	356
Bruno	26-7-4	2	71
Coley	24-7-4	2	333
Gilbreath	25-7-4	2	370
M-Qua-Ka	11-7-4	1	35
Nadash	29-7-5	4	471
Nealey	25-7-4	5	372
Nealey "B"	25-7-4	2	438
Nesbit	18-7-5	8	1,098
O-Kitchee	19-7-5	7	401
Sinclair et al:			
Kelly "A"	2-7-4	2	133
Skelly:			
Decker	16-7-4	3	1,076
Slick-White Eagle:			
Latimer	16-7-4	3	347
Superior:			
Caudle	13-7-4	2	22
Jackson	36-8-4	1	35
Texas:			
Cherry	25-7-4	4	315
Goodin	25-8-4	1	1
Twin State:			
Nona	4-7-4	1	71
Zoeller	30-7-5	1	9
Warner-Quinlan:			
Light	16-7-4	1	42
Westheimer-Daube:			
Freid	24-7-4	5	343
Garrett	23-7-4	2	45
Westheimer-Daube-Gypsy:			
McGee	23-7-4	5	53
Wyatt:			
Fee	10-7-4	1	18
Smith	26-7-4	1	30
Total		468	44,354

Asher Pool

Company, farm—	S.T.R.	Wells	Prod.
Commercial Development Co.:			
Townsite	19-6-4	1	10
Independent:			
Gardiner	19-6-4	1	119
Obermeyer:			
Townsite	19-6-4	1	Off
Prairie-Slick:			
Carpenter	19-6-4	1	461
Laster	19-6-4	8	520
Sims:			
Laster	19-6-4	5	965
Slick:			
Alexander	19-6-4	3	116
Bledsoe	20-6-4	1	14
Weldon	20-6-4	2	68
Slick-Amerada:			
Walker	19-6-4	2	67
Texola:			
Townsite	19-6-4	1	Off
Total		26	2,340

Sasakwa Pool

Company, farm—	S.T.R.	Wells	Prod.
Blackwell:			
Vanbuskirk	7-6-8	1	215
Carter:			
Aldridge	7-6-8	1	12
Brannon	18-6-8	1	Off
Davis	7-6-8	1	15
Fleet	13-6-7	1	Off
Phillips	18-6-8	1	22
Spillman	7-6-8	2	555
Gypsy:			
Phillips	18-6-8	1	45
I. T. I. O.:			
Fleet	13-6-7	1	280
Holatka	7-6-8	2	196
Magnolia:			
Diamond	8-6-8	1	7
Spillman	12-6-7	1	162
Prairie:			
Diament	12-6-7	1	37
Patton	18-6-8	2	65
Pure:			
Bates	13-6-7	8	4,203
Shell:			
Holatka	7-6-8	2	135
Signal:			
Bond	13-6-7	4	703
Sinclair:			
Davis "A"	17-6-8	7	2,121
Davis "B"	7-6-8	2	Off
Tiger	6-6-8	1	25
Skelly:			
Chapman	8-6-8	1	46
Texas:			
Bruner	9-6-8	1	10
Bryan	9-6-8	1	30
Twin State:			
Marshall	7-6-8	1	Off
Total		45	8,884

Konawa Pool

Company, farm—	S.T.R.	Wells	Prod.
Champlin-Shell:			
Sachemeche	9-6-6	2	891
Empire:			
Sachemeche	9-6-6	2	397
E. L. Harris et al:			
Harjoche	8-6-6	2	1,045
Gypsy:			
Barhan	8-6-6	1	42
Independent:			
Okfuske	16-7-4	1	7
Oyster	8-6-6	1	Off
McCulloch et al:			
Cully	16-6-6	1	611
Prairie:			
Griffin	17-6-6	1	181
Total		11	3,174

Allen Pool

Company, farm—	S.T.R.	Wells	Prod.
Barbara:			
Mount	36-5-7	1	10
Barnsdall:			
Lusty	15-5-7	1	478
Blackwell:			
Fleet	13-5-7	3	820
Burke-Greis:			
Nitchee	18-5-8	5	798
Dixie:			
Payton	1-4-7	3	150
Gilcrease:			
Punka	17-5-8	2	409
Reed	18-5-8	2	78
Reed, W.	18-5-8	1	20
Gypsy:			
Peter	18-5-8	9	244
Peter	23-5-7	3	2,512
Homaokla:			
Adams	19-5-8	7	112
McCall, M.	17-5-8	11	174
Milner et al	17-5-8	4	25

Company, farm—	S.T.R.	Wells	Prod.
Milner, J. B.	16-5-8	2	5
Ritchie	1-4-7	5	142
Wheeler	16-5-8	1	2
I. T. I. O.:			
Bingham	8-5-8	3	142
Mathis	13-5-8	2	198
Osborn	18-5-8	3	77
Loual-Carter:			
Bates	36-5-7	1	10
Louisiana O. & R. Co.:			
Harjo	17-5-8	6	158
McElroy	17-5-8	5	156
Perry	20-5-8	13	947
Pumiuste	8-5-8	4	346
Reed	18-5-8	4	282
Reed "A"	18-5-8	1	15
Statler	7-5-8	2	90
Warfle	20-5-8	3	165
Magnolia:			
Reed	17-5-8	8	542
Reed "A"	13-5-7	3	412
Parney	14-5-7	1	248
Mid-Continent:			
Fleet	7-5-8	15	1,461
Harjo	14-5-7	3	578
Pine, W. B.:			
Davis	17-5-8	1	88
Prairie:			
Harris	8-5-8	1	10
Simena	11-5-7	1	15
Wyecka	24-5-7	1	20
Ramsey:			
Butler	17-5-8	1	5
Butler, M.	20-5-8	1	10
Kerr	1-4-7	1	17
McElroy	17-5-8	1	40
Milner	17-5-8	9	865
Parker	17-5-8	2	40
Harjo	20-5-8	2	15
Smith	8-5-8	1	10
Warfle	20-5-8	1	5
Webb	20-5-8	5	75
Whitney	19-5-8	5	570
Shaffer, C. B.:			
Chapman	36-5-7	1	18
Yoakum	16-5-8	6	257
Sinclair:			
Amos "B"	7-5-8	1	156
Cully	13-5-7	2	104
Jefferson	23-5-7	5	701
Narchoche "A"	18-5-8	1	12
Narchoche "B"	18-5-8	5	110
Peter	18-5-8	2	72
Joanna "B"	24-5-7	1	140
Skelly:			
Osbourne	23-5-7	1	14
Sunray:			
Amos	7-5-8	1	65
Cully "A"	18-5-8	8	250
Cully "B"	18-5-8	8	567
Joanna	24-5-7	1	13
Nitchey	18-5-8	4	220
Nitchey, So.	19-5-8	3	340
Sarney	19-5-8	2	64
The Texas Company:			
Hyde	8-5-8	5	329
Lewis	13-5-7	2	768
Lucy	18-5-8	11	1,249
Jefferson	23-5-7	1	Off
Westheimer:			
Milliner	8-5-8	3	100
Westheimer et al:			
Wade	19-5-8	9	698
Westheimer-Daube:			
W. A. Patterson	29-5-8	1	32
Total		254	19,877

Oklahoma City Pool

Coline:			
Clour	25-11-3w	1	1,375
Olds	24-11-3	3	3,984
Warren	18-11-2	3	3,661
Cromwell-Franklin:			
Trosper Park	13-11-3	5	3,468
I. T. I. O.:			
Bodine, Anderson	30-11-2	1	931
Bodine, A.	24-11-3	4	1,656
Bodine, S.	30-11-2	2	13
Brokaw, A.	13-11-3	1	Off
Button	19-11-2	4	1,932
Canfield, L.	19-11-2	1	3,464
Canfield, Butt.	19-11-2	1	Off
Drake	14-11-3	2	Off
Emmerson, N.	30-11-2	2	Off
Farley	19-11-2	1	Off
Fortson, E.	24-11-3	2	2,836
Fortson-Farley	24-11-3	1	10,854
Foster	24-11-3	1	Off
Fuzzell, Farley	19-11-2	1	Off
Fuzzell	19-11-2	1	6,469
Fuzzell, Thomas	13-11-3	1	3,103
Henning, K.	24-11-3	1	203
Jennings	13-11-3	3	Off
Johnson	25-11-3	3	2,313
Joyce, E.	25-11-3	1	Off
Mackey	26-11-3	1	Off
Oklahoma City	24-11-3	1	Off
Peterson, Sadie	25-11-3	1	1,149
Speegle et al	24-11-3	1	Off
Trosper	13-11-3	7	2,346
Verne	13-11-3	2	Off
Waters	25-11-3	3	509
Wheeler	13-11-3	2	2,781
Williamson, Can.	24-11-3	1	144
Wilkie-Anderson	25-11-3	1	Off
Mid-Kansas:			
Browning	18-11-2	1	2,649
Fortson	24-11-3	5	1,009
Mollman	23-11-3	1	110
Trosper	19-12-1	1	241
Prairie-Slick:			
Hiddleston	19-11-2	5	6,775
Shaffer, J. C.:			
Childs	14-11-3	1	5,241
Shell:			
Petty	30-11-2	6	3,386
Sinclair:			
School Land No. 54	36-11-3	1	1,549
Stamper	30-11-2	6	348
Sinclair-Amerada:			
Kinter	30-11-2	2	869
Slick, T. B.:			
Glidden	13-11-3	2	758
Zerkerle	13-11-3	1	Off
Skelly:			
Hoops	31-11-2	1	1,210
Wirt Franklin:			
Lowery	12-11-3	1	3,067
Total		102	80,403

PANHANDLE FIELDS

(Continued from Page 74)

280 bbls. first 17 hours from lime pays at 2,960-71 feet and made 1,000,000 feet of gas at 3,020-25 feet. The Texas Company's No. 8 Cook-Faulkner, located Section 29, Block B-2, H.&G.N.R.R. Survey, was drilled to a total depth of 2,836 feet, topped the pay at 2,675-78 feet and at 2,740-45 feet and had an initial production of 330 feet. The Texas Company's No. 6 Combs-Worley, located Section 36, Block 3, I.&G.N.R.R. Survey, had an initial production of 475 bbls. at 2,835-45 feet and 2,913-18 feet and 2,928-35 feet.

Hockley County

World Oil Co.'s No. 1 Ellwood was dry and abandoned at a total depth of 5,080 feet.

Hutchinson County

Reliance Oil & Gas Co.'s No. 2 Sanford, located 330 feet south and east of NW W half north 80 acres of south 320 acres of Section 83, Block 46, H.&T.C. R.R. Survey, topped the pay at 2,935-38 feet, was drilled to a total depth of 2,938 feet and had an initial production of 50 bbls. oil and 10,000,000 feet of gas. The Texas Company's No. 4 Moore, located NE cor. SW Section 125, Block 4, I.& G.N.R.R. Survey, topped the pay at 3,073 feet, was drilled to a total depth of 3,095 feet and had an initial production of 105 bbls.

Wheeler County

Martin & Debous' No. 3 Close, located C NW of NE of Section 83, Block 23, H.&G.N.R.R. Survey, was drilled to a total depth of 1,665 feet and made 38,000,000 feet of gas from 1.545-1,663 feet.

WICHITA FALLS DISTRICT

Week ending February 22

Archer County

W. N. Alexander's No. 1 Turbeville was dry and abandoned at 1,550 feet. Burns & Long's No. 10 Turbeville had an initial production of 56 bbls. at 1,472-80 feet. Van Alexander Syndicate's No. 2 White had an initial production of 2 bbls. at 1,437-54 feet. L. T. Burns' No. 2 Harmel had an initial production of 15 bbls. at 1,430-34 feet. W. D. Cline and others' No. 2 Hayter was dry and abandoned at 1,485 feet. Douglas Oil Co. and others' No. 1 Dunman was dry and abandoned at 1,428 feet. Goldsmith & King Royalty Co.'s No. 4 Deitrich had an initial production of 30 bbls. at 1,153-58 feet. Magnolia Petroleum Co.'s No. 7 Deitrich had an initial production of 51 bbls. at 1,168-71 feet.

Baylor County

Barnsdall Oil Corp.'s No. 1 Portwood had an oil show at 1,396 feet, was drilled to a total depth of 1,402 feet and had an initial production of 135 bbls. oil and 4 bbls. water. Consolidated Oil Co.'s No. 7 Portwood was dry and abandoned at 1,452 feet and its No. 10 Portwood had an initial production of 118 bbls. at 1,391-1,407 feet.

Cooke County

Richardson Brothers' No. 1 Shaley was dry and abandoned at 2,227 feet.

Grayson County

F. H. E. Oil Co.'s No. 1 Finke was dry and abandoned at 1,015 feet.

Jack County

Bryson Oil & Gas Co.'s No. 2-A Loving was shot with 10 quarts from 3,172-89 feet and had an initial production of 50 bbls. after having plugged back to this depth from 3,289 feet. Republic Production Co.'s No. 1 Enlow was dry and abandoned at 260 feet. Shaw Oil Corp.'s No. 6 Box had an initial production of 30 bbls. at 3,117-40 feet. Its No. 7 Box location was abandoned.

Throckmorton County

C. & B. Oil Co.'s No. 2-A Leathers was dry and abandoned at 430 feet.

Wilbarger County

Empire Gas & Fuel Co.'s No. 29 Waggoner had an oil show at 2,286 feet, was shot with 30 quarts from 2,286-2,320 feet and had an initial production of 60 bbls. The Texas Company's No. 3 Waggoner was dry and abandoned at 2,416 feet. Zenith Oil Co.'s No. 2 George had an initial production of 400 bbls. at 2,197-2,216 feet.

Wichita County

C. E. Litchfield's No. 1 Hursh was dry and abandoned at 2,325 feet. Continental Oil Co.'s No. 5 Waggoner made 62½ bbls. at 1,291-92 feet. G. H. Howell's No. 1 Allen Foster was dry and abandoned at 1,001 feet. McCarty Oil Co.'s No. 1 Kemp & Kempner was dry and abandoned at 1,970 feet. Turman Oil Co.'s No. 17 Waggoner made 62 bbls. at 1,584-88½ feet.

Young County

Cunningham and others' No. 2 Kisinger had an initial production of 135 bbls. at 2,510-44 feet. Panhandle Refining Co.'s No. 1 Kimbrell was shot with 30 quarts from 4,872-84 feet with no results. Bolin & Lindsey's No. 7 Wolf had an initial production of 91 bbls. oil at 872 feet. A. A. Brashear's No. 1 Clark was dry and abandoned at 930 feet. Fowler and others' No. 2 Hill had an initial production of 38 bbls. at 1,032-38 feet. W. L. Hawkins' No. 1 Stewart was dry and abandoned at 830 feet. T. F. Hunter's No. 1 Johnson was dry and abandoned at 1,098 feet. King Royalty and Mooers' No. 1 Kunkel was dry and abandoned at 1,161 feet. C. B. Long's No. 1 Hausler had an initial production of 21 bbls. oil at 1,068-72 feet.

John Menke's No. 1 Smith was dry and abandoned at 1,304 feet. Nimrod Oil Co.'s No. 1 Hall had an initial production of 10 bbls. at 877-92 feet. Panhandle Refining Co.'s No. 1 Prideaux had an initial production of 2 bbls. at 664-67 feet. E. R. Riggs' No. 5 Ketter was dry and abandoned at 940 feet. Smith & Pennell's No. 1 Prideaux Brothers was dry and abandoned at 600 feet. Sorrell & Jackson's No. 1 Keathley was dry and abandoned at 1,070 feet. Stump & Heydricks' No. 3 Daniels had an initial production of 15 bbls. at 868-79 feet. United Producers Co.'s No. 2 Lederman had an initial production of 60 bbls. at 867-84 feet. C. C. Williams' No. 1 Taack had an initial production of 30 bbls. at 664-72 feet. Wise & Jackson's No. 7 Cullers had an initial production of 20 bbls. at 551-83 feet. Wo-Mac Oil Co.'s No. 2 Roach had an initial production of 145 bbls. at 734-40 feet.

RANGER COMPLETIONS

Week ending February 22

Brown County

Arcadia Refining Co.'s No. 1 Reaves was drilled to a total depth of 1,291 feet, encountered sand at 1,290 feet and had an initial production of 30 bbls. oil and 6 bbls. water and is now making 8 bbls. oil and 16 bbls. of water. Beasley and others' No. 1 Boysen was dry and abandoned at 1,275 feet. Michael & Nichols' No. 1 Butler was drilled to a total depth of 1,320 feet, was plugged back to 1,284 feet and had an initial production of 7 bbls. G. P. Mitcham's No. 1-C Newton was dry and abandoned at 1,223 feet. Phillips Petroleum Corp.'s No. 1-A Williams encountered gas sand at 826-30 feet, was drilled to a total depth of 830 feet and had an initial production of 950,000 feet of gas and producing 250,000 feet daily with 200 pounds back pressure. E. L. Smith Oil Co.'s No. 1 Curry was dry and abandoned at 1,641 feet.

Comanche County

Sun Oil Co. and others' No. 1 Bryson topped the Ellenbarger lime at 2,708 feet and was dry and abandoned at 2,952 feet.

Eastland County

Harbin & Heflin's No. 1 Harbin had a light show of oil at 1,150-55 feet, made 250,000 feet of gas and was dry and abandoned. Root Drilling Co.'s No. 1 Stamps was drilled to a total depth of 3,842 feet, was shot with 110 quarts from 3,570-3,650 feet and was dry and abandoned.

Coleman County

Levi Smith's No. 10 Morris was drilled to a total depth of 2,019 feet, encountered sand at 2,013 feet and had an initial production of 13 bbls. oil and 1 bbl. water. Lloyd Oil Corp.'s No. 4 Bartholemew was drilled to a total depth of 1,452 feet, encountered sand at 1,421-45 feet and had an initial production of 40 bbls. oil.

Stephens County

Heath's No. 1 Beck was dry and abandoned at a total depth of 1,436 feet.

Palo Pinto County

Brazos River Oil & Gas Co.'s No. 1 Conklin was drilled to a total depth of 1,361 feet and tested 2,000,000 feet of gas at 1,331-61 feet.

Shackelford County

McClintock & Griffin's No. 1 Davis was dry and abandoned at 1,330 feet. Simms Oil Co.'s No. 2-A Lones was dry and abandoned at 732 feet. Texas Consolidated Oil Co.'s No. 1-D Reynolds was dry and abandoned at 1,250 feet.

OIL QUESTIONS AT A.I.M.E. MEETING

(Continued from Page 38)

enjoyed the fruits of unit operation at an early date.

Rocky Mountain operators have classified their fields into four types, Mr. Wood said. They are:

1. Unit operation: Any field whereby the competitive drilling-drainage feature is or will be absent in the development and operation of the pool.

2. Near unit operation: Any plan whereby the competitive drilling-drainage feature is or will be reduced or regulated in the development and operation of the pool.

3. Co-operative agreements: Any agreement whereby production is prorated, expenses pooled, drilling programs mutually curtailed, etc.

4. Undeveloped fields: Any plan which is in progress whereby undeveloped or partially developed fields will be a unit or near-unit operation.

Saving effected by unit operation for production and development costs alone in the Rocky Mountain area, he said, have totaled $20,752,000, made up of savings of $5,500,000 at Rock River, $1,716,000 in South Baxter Basin, $272,000 in North Baxter Basin, $714,000 in Hiawatha, $500,000 at Rex Lake, $11,650,000 at Salt Creek, and $400,000 at Little Buffalo Basin. These savings do not include economies effected by the reduction in general overhead, field and general office management, elimination of need for increased pipe lines and storage facilities, gas plants to care for peak production, etc.

"These savings," Mr. Wood concluded, "definitely prove that unit or near-unit operation is highly profitable whether or not an increase in ultimate recovery occurs."

Election of Officers

Charles V. Millikan was elected chairman of the petroleum division for the ensuing year, other officers elected being as follows: Associate chairman, L. L. Brundred; secretary-treasurer, H. C. George; vice chairman production engineering, William K. Whiteford; associate chairman, production engineering, W. W. Scott and Victor H. Wilhelm; vice chairman for economics, J. Elmer Thomas; vice chairman for production, D. R. Snow; vice chairman for engineering research, Harry H. Hill; vice chairman for engineering education, Ernest R. Lilley; and members of executive committee, Joseph B. Umpleby, John R. Suman, Charles E. Beecher and J. A. Holmes, Jr. The executive committee will select a chairman for refining engineering.

There was a large turn-out for the annual banquet of the petroleum division, which was held at the Engineer's Club on the evening of February 20.

MAGNETOGRAM SERVICE IS BEING INAUGURATED

(Continued from Page 41)

to its base line gives the relative variation in the earth's magnetic field of the particular component being measured. The continuous recording instruments give, then, a picture of the variations relative to their base lines.

"The base lines are evaluated by a separate set of instruments outside the observatory which measure in absolute units the intensity of their respective components, and give the value in absolute units to the base lines of the recording instruments. It will be well to remember that the Department of Terrestrial Magnetism measures the entire intensity in gammas, while most oil companies measure a relative intensity also in gammas with respect to a base station

to which they assign an arbitrary value.

Interpretation of Magnetograms

"Figure 2 shows the magnetogram for September 6, 1929, which contains a severe magnetic storm (intensity 2). The two lines at the top are the Z (vertical intensity) base line and the record of the Z component. The record indicates that the vertical intensity decreased from plus 12 gammas at 8 o'clock to 0 at 9:20 and minus 24 at 12:30, the minimum for the day. The increase was regular in the afternoon, reaching 0 at 15:45 (3:45 p. m.) and continuing to increase until 5:20 when the value was plus 10 gammas. For the rest of the night the vertical intensity fluctuated between plus 16 and plus 3 gammas, as indicated. Changes are noted at 16:40 when the storm began, at 22:30 and at 3:00.

"The two middle lines show the fluctuations in D (declination) in minutes. Changes are shown likewise at 16:40, at 22:30 and 3:00.

"The two lower lines are the H (horizontal intensity) base line and record. The storm shows up most clearly on this component for two reasons: first, the scale is a little larger, and, second, the variation in horizontal intensity is much greater at Tucson than it is in vertical intensity. Horizontal intensity also decreases as noon of September 6 is approached and increases during the afternoon. The storm, beginning at 16:40, is marked by a sharp break of plus 30 gammas. This break occurred at 4:40 Mountain time, 5:40 Central time, 6:40 Eastern time, and 3:40 Pacific time.

"As magnetic storms are almost simultaneously recorded at the various observatories over the earth, any magnetic work done during this storm would likely be in error. This storm would probably be of more interest to operators on the Pacific Coast, as it occurred during the late afternoon in daylight hours. The magnetogram clearly shows that the storm continued during the night, becoming less evident in the early hours of the morning of September 7, 1929. It is generally true that the night hours are more disturbed than daylight hours and is a fact to be considered in making tests of various sorts with magnetic instruments at night.

"Magnetic storms follow no general plan and each is an individual affair with its own characteristics. The storm of September 6 shows a distinct break. It does not follow that all storms start in this manner. A storm ends only in the opinion of the operator whose limit of error helps to determine such a point."

As frequently as these telegrams are received from the Tucson observatory they will be published in The Oil and Gas Journal in the form of a small box in a prominent position in the book.

No attempt will be made to interpret the data furnished for it is believed that this can best be done by the magnetometer operator and the important information for him is the starting and ending time of the storm and its relative intensity.

Suggestions as to how this service may be improved will be welcomed by this department and it is hoped that it will prove of a distinct economical and practical benefit to the geophysical branch of the industry.

GEOLOGISTS' PROGRAM AT NEW ORLEANS

(Continued from Page 40)

Tertiary History of the Region of the Sabine Uplift, C. L. Moody, Shreveport, La.

The White Point and Saxet Fields, San Patricio and Nueces Counties, Texas, W. Armstrong Price, Houston, Tex.

Physiography of the Corpus Christi Area, Texas, W. Armstrong Price, Houston, Tex.

Faulting in Southwestern Arkansas, C. L. Rankin, Lake Charles, La.

Deep Sand Developments in the Cotton Valley Field, Webster Parish, Louisiana, J. S. Ross, Washington, D. C.

Oligocene and Miocene Formations of Southwestern Alabama, D. R. Semmes, San Antonio, Tex.

Notes on Wells Penetrating the Cretaceous in Alabama and Georgia, D. R. Semmes, San Antonio, Tex.

Dixie Oil Pool, Caddo Parish, Louisiana, H. K. Shearer and E. B. Hutson, Shreveport, La.

The Comanche Series of Louisiana and Arkansas, W. C. Spooner, Shreveport, La., and R. T. Hazzard, Shreveport, La.

Phases of Sedimentation in the Gulf Coastal Prairies of Louisiana, R. A. Steinmayer, New Orleans, La.

The Mississippi Delta, Arthur C. Trowbridge, Iowa City, Iowa.

Blue Ridge Dome, John F. Weinzierl, Houston, Tex.

Papers on Foreign Fields

Oil Possibilities of France, Frederick G. Clapp, New York City.

A Reconnaissance in Northern Persia, Frederick G. Clapp, New York City.

The Alberta Syncline, Canada, Theodore A. Link, Calgary, Alberta, Canada.

Geology of Prospective Oil Territory in the Republic of Turkey, Shirley L. Mason, Pittsburgh, Pa.

Geology of Southwest Ecuador, George Sheppard, Guayaquil, Ecuador, South America.

Geology of Russian Oil Fields, Basil B. Zavoico, Tulsa, Okla.

Geophysical

Magnetometer Study of the Caddo-Shreveport Uplift, Louisiana, William M. Barrett, Shreveport, La.; discussion by D. M. Collingwood, Dallas, Tex.

Geophysical Prospecting for Oil, Donald C. Barton, Houston, Tex.

Review of Geophysical Prospecting for Petroleum, Donald C. Barton, Houston, Tex.

Geological and Geophysical Notes on Hobbs Oil Field, Lea County, New Mexico, R. Clare Coffin, Denver, Colo.

Geo-Electric Investigation on Non-Conductors: Some New Examples, N. Gella.

An Electrical Survey of Structural Conditions in the Bruner Field, Caldwell County, Texas, Helmer Hedstrom, Houston, Tex.

Teaching of Geophysical Prospecting, C. A. Heiland, Golden, Colo.

Transmission of the Instant of Explosion in Seismic Prospecting, C. A. Heiland, Golden, Colo.

Notes on Geophysical Investigations in Colorado, C. A. Heiland and John H. Wilson, Golden, Colo.

Magnetometer Survey of Little Fry Pan Area, Uvalde and Kinney Counties, Texas, R. A. Liddle, Fort Worth, Tex.

Magnetic Investigations North of the Illinois Oil Fields, Gail F. Moulton, Meridian, Miss.

Some Results of Elastic-Wave Surveys in California and Elsewhere, Frank Rieber, San Francisco, Calif.

Factors Influencing the Selection of the Geophysical Method in Accordance With the Subsurface Problem to Be Solved, Frank Rieber, San Francisco, Calif.

Electric Prospecting for Oil Structure, Karl Sundberg, New York.

Wave-Front Diagrams in Seismic Interpretation, H. R. Thornburgh, Dallas, Tex.

Papers on Salt Domes

Resume of Present Activities and Some Difficulties in the Development of Southern Louisiana Salt Domes, E. R. Ames, Orange, Tex.

Experiments Relating to Salt Dome Structures, Theodore A. Link, Calgary, Alberta, Canada.

Deep Sand Development at Barbers Hill Salt Dome, P. C. Murphy and Sidney A. Judson, Houston, Tex.

Contribution to the Salt Dome Problem, F. M. Van Tuyl, Golden, Colo.

Special Technical Subjects

Geothermal Variations in Some Oil Fields of the Los Angeles Basin, California, Anders J. Carlson, Berkeley, Calif.

Use of Vegetation as an Indicator of Geologic Formations, Robert H. Cuyler, Austin, Tex.

Use of Airplane Photographs in Geologic Mapping, Walter A. English, Los Angeles, Calif.

Practical Determination of the Optimum Spacing of Oil Wells, Roswell H. Johnson, Pittsburgh, Pa., and Sylvester H. Rynearson.

Relative Reliability in Structure Contour Maps Made from Comparative Elevations and From Dip Readings, Roswell H. Johnson and Frank G. Parris, Pittsburgh, Pa.

Accuracy of Bore Hole Surveying by Orientation From the Surface, R. P. McLaughlin, Los Angeles, Calif.

Orientation of Cores, George A. Macready, Los Angeles, Calif.

Determination of Geothermal Gradients in Oklahoma, John A. McCutchin, Norman, Okla.

Crooked Hole Problems in the Gulf Coast, P. C. Murphy and Sidney A. Judson, Houston, Tex.

Geochemical Studies of the Woodbine Sand in East Texas (presented by permission of the American Petroleum Institute and the Bureau of Economic Geology, Austin, Tex.), F. B. Plummer and E. C. Sargent, Austin, Tex.

Summary of Results Obtained to Date by the American Petroleum Institute Research Investigation on the Origin and Environment of Source Sediments (published by permission of the American Petroleum Institute), Parker D. Trask, Princeton, N. J.

Crooked Holes in Turner Valley, Alberta, Canada, E. P. Van der Linden.

Geology In General

The Hendricks Pool, Winkler County, Texas, A. L. Ackers, Midland, Tex.; R. DeChicchis, Midland, Tex.; and R. H. Smith, Wink, Tex.

Origin of the Oil and Its Reservoir in the Yates Pool, Pecos County, Texas, John Emery Adams, Midland, Tex.

Preliminary Report on the Geology of Montague County, Texas, Fred M. Bullard and Robert H. Cuyler, Austin, Tex.

Permian Formations of Northwestern Oklahoma and Adjacent Areas, R. L. Clifton, Enid, Okla.

Probable Age of the Balcones Fault, Robert H. Cuyler, Austin, Tex.

Subdivision of the Simpson, of the Arbuckle and Wichita Mountains of Oklahoma and Correlation of the Formations (published by permission of Oklahoma Geological Survey), Charles E. Decker, Norman, Okla.

Valley Center Oil Field, Sedgwick County, Kansas, Roy H. Hall and Arthur Price, Wichita, Kans.

Clay Creek Salt Dome, Washington County, Texas, F. E. Heath, J. A. Waters, and W. B. Ferguson, Dallas, Tex.

An Unconformity in the Colorado Group in Eastern Colorado, J. Harlan Johnson, Golden, Colo.

Pre-Dakota Stratigraphy of the Rocky Mountain Front Range of Colorado and Wyoming, S. H. Knight, Laramie, Wyo.

Pennsylvanian Overlap in the United States, A. I. Levorsen, Tulsa, Okla.

Subsurface Distribution of Pre-Mississippian Rocks of Kansas and Oklahoma (to be read by title), Hugh McLellan, Tulsa, Okla.

The Stratigraphy of the Turner Valley Field, Canada, P. D. Moore, Calgary, Alberta, Canada.

Geology of Vermillion Creek Gas Area in Southwest Wyoming and Northwest Colorado, W. T. Nightingale, Rock Springs, Wyo.

Oklahoma City Oil Field, Oklahoma, R. J. Riggs and Homer H. Charles, Bartlesville, Okla.

Pre-Cretaceous Rocks of the Balcones Fault Zone of Texas, E. H. Sellards, Austin, Tex.

Some Further Suggestions About Permo-Carboniferous Orogeny in South-Central United States, W. A. J. M. van der Gracht, Feldbach, Austria.

The Ancestral Rockies, Walter A. Ver Wiebe, Wichita, Kans.

Surface and Subsurface Structure of the Tri-County Oil Fields of Southwestern Indiana, J. M. Wanenmacher and W. B. Gealy, New York City and Pittsburgh, Pa.

The Simpson of Central Oklahoma, T. E. Weirich, Tulsa, Okla.

SIMPLIFIED CRACKING UNIT IS INTRODUCED

(Continued from Page 46)

the arrangement of the tubes. The oil flow after leaving the convection heating section starts at the bottom tube on one side and works its way to the top and then passes through the ceiling tubes over to the top on the opposite wall section and then passes down to the outlet tube on the bottom.

The flame travel is naturally away from the burners at opposite ends and the flame itself is lost as combustion is completed in the large open space in the center of the still. The gases of combustion pass through a brick checker work placed in one side and at the bottom of the large compartment. This checker work serves as an entrance for hot gases into the convection or economizer section. The travel of the gases there is staggered upward against the tubes and then they pass out the stack. The roof on the economizer section slopes downward in the path of the gases so the velocity of the gas flow remains uniform as they are cooled.

The tubes in both the convection and the radiant sections are 22 feet long and have half-inch walls. The tubes in the radiant section are 2½ inches I.D. and the convection section is made up of 2¾ inches I.D. tubes. The tube ends are inclosed with Type A Seco return bends with ball and socket and metal gasket joint.

Yields

Representative ultimate yields, after rerunning the pressure distillate and charging a 24 gravity reduced Mid-Continent crude, will approximate 50 per cent U. S. Motor gasoline, 3 per cent heavy furnace oil, 39 per cent 8-9 gravity fuel and 4 to 8 per cent gas. The amount of carbon produced is nil under normal operating conditions. Inspection and repair manholes are placed in the tower at each bubble cap section. The yield of pressure distillate varies with the endpoint desired but at present the operation is carried on to yield a 440 endpoint product.

This is treated with 2½ pounds of concentrated acid and neutralized with caustic. Then it is rerun for the desired endpoint gasoline. This gasoline is given a light doctor treatment to produce a sweet, noncorrosive finished product.

The quality of the fuel oil may be varied somewhat, depending upon the intensity of the cracking, but under the conditions outlined above the gravity of the product will average about 8½ and can be made with a Furol viscosity at 122° F. of approximately 225. The fuel may be reduced further in viscosity by blending a portion of the pressure distillate bottoms with it.

Higher Pressure Possible

The pipe still has been designed to operate over a very wide range of pressures and temperatures. The tubes and system, up to the mixer, is designed to operate at pressures up to 1,400 pounds and temperatures up to 1,000° F.

Cycle of Operation

Under normal operating conditions the cycle of operation will exceed 30 days. A run of this duration has been completed and at the end of that run it required 18 hours down for inspection, cleaning and repairs. Most of this time was spent in repairing and replacing packing in pumps and valves.

Fuel Costs

The fuel consumption approximates 1.5 per cent of residuum based on the raw oil charged, and fixed gas produced during processing supplies remainder of fuel and the 1½ per cent of residuum used is for the purpose of supplying radiant heat to the furnace. Another index of the low operating cost of the unit is the fact that only two men are used on each shift.

Selection Range of Cracking Stocks

The process and apparatus are capable of operating on any type of cracking stock desired to be cracked, such as naphtha, kerosene distillate, furnace distillate, pressure distillate bottoms, gas oil, lube distillates and fuel oils.

COLON PRODUCTION

The Colon Development Co., Ltd., operating subsidiary in Venezuela of Colon Oil Corp., announces production for the week ended February 14, as 90,000 bbls. from 19 wells.

Portrait of a GUARDIAN

JUST a safety valve...a simple mechanism to relieve excessive pressures on boilers and steam lines ...yet truly a guardian of valuable property.

Back of every Consolidated Safety Valve is the honor and integrity of the oldest and best-known manufacturers of valves and instruments. WE cannot afford to manufacture undependable guardians of your property.

Consolidated Ashcroft Hancock Co., Inc.
Bridgeport, Conn.
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CONSOLIDATED ASHCROFT HANCOCK

Consolidated SAFETY VALVES

Specify Catalogs Desired:

American Dial Thermometers	G-5	American Recording Gauges	E-5	Ashcroft American Gauges	T-5
American Glass Thermometers	F-5	American Draft Gauges	B-5	Consol. American Safety Valves	Z-5
American Recording Thermometers	H-5	American Gauge Testers	D-5	Consol. American Relief Valves	V-5
American Quality Gauges	A-5	American Tachometers	J-5	Hancock Globe & Check Valves	X-5
American Temperature Controllers	R-5	Ashcroft Power Control Valves	M-5	Metropolitan Injectors	Y-5

The question of elimination of crooked holes is foremost in the minds of operators.

Use spiral stems manufactured by the Titusville Forge Co., and you will eliminate this question once and for all.

The Nebergall Stem

TITUSVILLE FORGE COMPANY
TITUSVILLE, PENN.

OKLAHOMA GROSS PRODUCTION FOR FOURTH QUARTER

(Continued from Page 111)

Name and address—	Barrels	M. Feet	Amount
Sampson Oil Co., Tulsa	.....	.....	6,0[illegible].17
Simpson, Guy,* Duncan	.....	.....	2,675.00
Simpson, Susan A.,* Tulsa	.....	.....	9,1[illegible]6.15
Shirley, Gracie I. and H. L.,* Tulsa	.....	.....	3,[illegible]3.95
Swindler James A., Muskogee	.....	.....	7,827.32
Stekoll, Tulsa	13,599.87	.....	20,521.81
Sarasota Oil Co.,* Ardmore	3,169.20	.....	3,760.92
Seay, Clyde and W. D.,* Oscar	.....	.....	7,589.68
Slogan, Agnes C.,* Lawton	.....	.....	8,775.66
Sawyer, A. H.,* New York City	.....	.....	4,802.78
Seavy, O. W., Ryan	.....	.....	9,189.77
Summerfield, Joseph,* Memphis, Tenn.	.....	.....	2,036.77
Summerfield, Mosea A.,* Memphis, Tenn.	.....	.....	2,036.79
Shultz, C. L.,* Tulsa; paid by Gypsy Oil Co.	1,959.42	.....	3,544.87
Sikes, Louise, Oklahoma City	.....	.....	12,020.60
Sloan, J. W.,* Tulsa	.....	.....	2,104.77
Seger, C. H., Tulsa	5,563.66	.....	8,853.51
Sowards, Fred and Willard,* Stroud	.....	.....	2,196.89
Snedden, George W., Tulsa	23,294.58	.....	37,127.14
Sharp, Robert C., Tulsa	4,830.40	.....	6,840.81
Shepherd, J. D.,* Shawnee	.....	.....	10,403.96
Smelser, R. S.,* Mannford	.....	.....	2,583.98
Sporleder, William,* Okemah	3,104.19	.....	5,377.32
Summers, Mrs. George M.,* Tonkawa	.....	.....	3,499.50
Streck, Jennie S.,* Hennessey	.....	.....	6,087.24
Sandforx, Edwin,* Oklahoma City	.....	.....	2,585.20
Sessions, Leigh J., Corp.,* New York City	.....	.....	2,347.66
Spencer, Alice and T. J.,* Wewoka	.....	.....	6,409.80
Spring, Earl,* Ryan	.....	.....	2,417.95
Sims, Watson,* Ivanhoe, Tex.	.....	.....	2,307.84
Sturgeon, Hulda E.,* Wewoka	.....	.....	2,676.88
Scott, Lucy,* Holdenville	.....	.....	3,150.33
Scott, George W., Agra	.....	.....	5,344.17
Sykes, C. E.,* Ardmore	.....	.....	2,461.30
Stuart, Phil N.,* Shawnee	.....	.....	3,671.29
Surber, O. B.,* Chickasha	.....	.....	2,186.03
Sanford, J. P.,* Seminole	.....	.....	2,138.97
Slough, E. D., trustee,* Ardmore	.....	.....	2,965.59
Shepherd, Dan, guardian,* Shawnee	.....	.....	8,858.78
Sparks, A. S.,* Ardmore	.....	.....	2,405.06
Sparks, Harriett W.,* Shawnee	.....	.....	7,878.44
Sparks, L. O., administrator,* Oklahoma City	4,416.18	.....	7,694.10
Schermerhorn Oil Co., Minneapolis, Minn.	.....	.....	14,988.08
Schermerhorn-Ardmore Co., Minneapolis, Minn.	88,062.98	76,303	106,235.69
Schermerhorn, J. B., Inc., Minneapolis, Minn.	63,489.34	.....	85,540.42
Schermerhorn, J. B., Inc.,* Minneapolis, Minn.	4,104.55	.....	2,931.80
Smith & Elliot, Tulsa	4,085.57	.....	5,236.40
Smith, Will H., Ardmore	3,979.35	.....	5,228.47
Smith, Will H., Ardmore	.....	Gas	1,180.55
Smith, J. M.,* Wewoka	.....	.....	3,033.76
Smith, G. J., Tulsa	.....	.....	10,735.66
Smith, G. J.,* Tulsa	.....	.....	12,374.33
Smith, Steve,* Blackwell	.....	.....	2,423.19
Smith, Leona,* Blackwell	.....	.....	2,423.19
Smith, R. Earl,* Blackwell	.....	.....	2,423.19
Smith, Terry G.,* San Diego, Calif.	.....	.....	2,060.34
Smith, John,* Wetumka	.....	.....	2,787.31
Smith, M. M.,* Wewoka	.....	.....	2,420.24
Smith, Crittenden, trustee,* for Willie King, Okmulgee	.....	.....	2,123.05
Smith, Charles R., Jr., Ardmore	5,376.40	.....	7,428.83
Smith, Charles R., Jr., Ardmore	.....	40,565	3,993.81
Smith, C., estate, Ardmore	3,102.77	.....	4,879.88
Smith, C. R., estate, Ardmore	.....	Gas	2,912.10
Smith, Marie S., Ardmore	6,376.16	.....	8,743.67
Smith, Marie S., Ardmore	.....	54,860	5,432.51
Smith, N. Bert,* Oklahoma City	.....	.....	12,351.17
Smith, N. Bert,* Royalty Trust, Oklahoma City	.....	.....	109,547.49
Sangster, Joe B.,* Earlsboro	.....	.....	2,887.49
Superior Oil Co., Tulsa	188,207.45	.....	284,617.44
Superior Oil Co., Tulsa	.....	342,201	19,323.32
Superior Oil Co. for C. E. Gragg, Tulsa	.....	.....	3,073.23
Superior Oil Co. for A. E. Graham, Tulsa	.....	.....	9,834.34
Superior Oil Co. for S. S. Orwig, Tulsa	.....	.....	5,736.70
T			
Transcontinental Oil Co., Tulsa	102,346.30	.....	147,831.56
Transcontinental Oil Co., Tulsa	.....	302,749	21,645.79
Twin State Oil Co.,* Tulsa	.....	.....	9,535.66
Twin State Oil Co., Tulsa	479,738.82	.....	556,525.68
Twin State Oil Co., Tulsa	.....	775,875	31,511.55
Tidal Oil Co., Tulsa	513,817.62	.....	744,026.00
Tidal Oil Co., Tulsa	.....	Gas	29,768.00
Tidal Oil Co.,* Tulsa	8,286.77	.....	10,825.05
Tidal Oil Co. for partners, Tulsa	7,846.08	.....	9,869.13
Tiger Mountain Oil Co., Tulsa	3,127.38	.....	4,422.22
Tulsa Royalties Co.,* Tulsa	.....	.....	3,069.33
Thompson, R. B.,* Tulsa	3,645.57	.....	5,660.50
Thompson, J. N.,* Tulsa	1,484.85	.....	2,391.44
Thompson, S. F.,* Okemah	.....	.....	3,904.21
Talbott, W. G.,* Oklahoma City	.....	.....	6,916.53
Thompson, William M.,* Tulsa	3,647.91	.....	5,723.94
Thomas, Rufus S.,* Lexington	.....	.....	4,021.79
Thomas, G. M.,* Norman	.....	.....	2,770.43
The Texas Company, production department, Oklahoma City	1,076,909.73	.....	1,641,240.84
The Texas Company, production department, Oklahoma City	.....	Gas	126,511.64
The Texas Company, production department,* Oklahoma City	7,083.16	.....	12,074.31
The Texas Company, production department,* Oklahoma City	.....	Gas	448.03
The Texas Company, production department, (suspense), Oklahoma City	.....	.....	6,519.66
Texas Pacific Coal & Oil Co., Thurber, Tex.	54,659.67	6,749	48,661.66
Texworth Securities Corp.,* Brooklyn, N. Y.	.....	.....	4,239.73
Texola Oil Co., Oklahoma City	3,852.01	.....	5,614.95
Turman Oil Co., by receivers, Tulsa	135,791.25	.....	223,432.35
Turman Oil Co., by receivers, Tulsa	.....	197,277	12,008.79
Turman Oil Co., Tulsa	4,948.14	2,038	7,126.98
Thlocco Oil Co., Tulsa	9,085.79	.....	15,716.35
Taylor Petroleum Corp., Tulsa	.....	.....	23,831.30
Taylor, Dr. Joseph C.,* New York, N. Y.	.....	.....	5,579.33
Tully, Martha Nadine, nee Andrews,* Muskogee	.....	.....	2,680.07
Talley, T. F., and Cynthia, Sulphur	.....	.....	4,133.27
Turley, G. W.,* Britton	.....	.....	2,054.71
Tucker, F. E.,* Ardmore	.....	.....	2,939.87
Triangle Royalty Corp.,* Oklahoma City	.....	.....	3,005.00
Towes, A. W.,* Crisfield, Md.	.....	.....	4,030.22
Thornton, David P.,* Muskogee	.....	.....	2,589.55
Townsend, M. T.,* Ada	.....	.....	3,219.11
Travis, Sarah Leota,* Dover	.....	.....	6,103.86
Tarter, Daniel,* Asher	.....	.....	11,804.25
Templeton, M. E.,* Phoenix, Ariz.	.....	.....	16,517.81
Tull, Vida M.,* Oklahoma City	5,869.31	.....	10,858.00
U			
United Eight Oil Trust, by receiver, Ardmore	6,842.33	.....	10,846.77
U. S. Royalties Corp.,* New York, N. Y.	8,623.59	.....	13,813.79
U. S. Royalties Corp., New York, N. Y.	.....	Gas	420.78
Utilities Production Corp., Tulsa	.....	796,526	39,423.74

(Continued on next Page)

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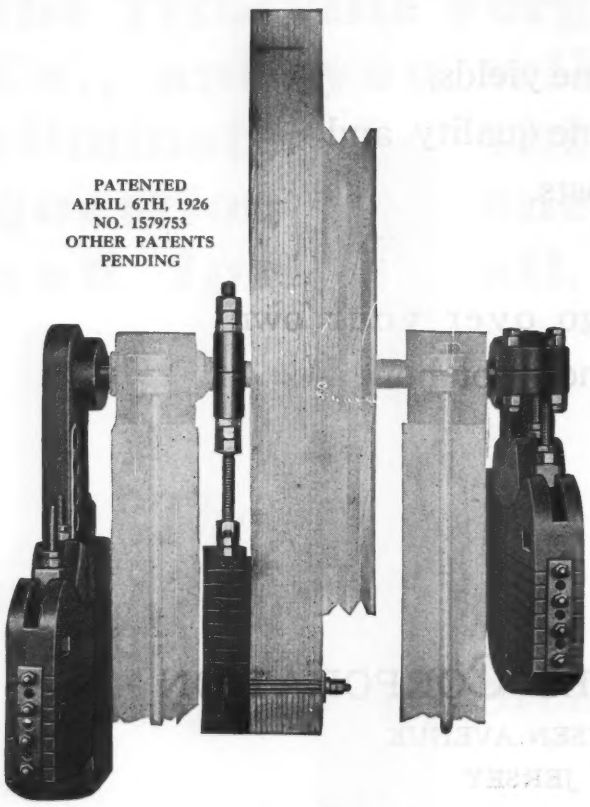

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Hillman Kelley, Inc., Los Angeles, California

Name and address—	Barrels	M. Feet	Amount
Union Oil & Mining Co., Tulsa	4,767.64	.....	7,591.51
Urbansky, Virgie and Joseph,* Oklahoma City	.....	.....	2,486.38
Umburn, Gillia, Weleetka	.....	.....	10,447.79
V			
Vacuum Oil Co., Houston, Tex.	110,901.97	328,957	194,534.26
Viersen Oil & Gas Co.,* Okmulgee	18,483.14	.....	30,029.71
Viersen, A. A.,* Okmulgee	13,277.77	.....	21,705.74
Viersen, Sam K.,* Okmulgee	4,580.62	.....	7,465.15
Viersen, R. W.,* Okmulgee	2,268.87	.....	3,737.04
Vassar, Amanda,* Tulsa	.....	.....	3,247.05
Voorhees, Leon G.,* Oklahoma City	.....	.....	12,385.72
Vernon Oil & Gas Co., Blackwell	.....	.....	9,435.92
Varnum, R. D.,* Shawnee	1,425.89	.....	2,297.21
Varnum, W. F.,* Shawnee	12,912.21	.....	21,586.55
Varnum, Lucile,* Shawnee	.....	.....	2,297.21
Varnum, Vivian,* Shawnee	.....	.....	2,297.21
Varnum, Eliza P.,* Shawnee	5,377.84	.....	8,589.80
Vance, S. E.,* Tulsa	2,005.01	.....	3,794.73
Vance, Mary E.,* Tulsa	2,018.77	.....	3,338.35
Villines, T. F.,* Maud	.....	.....	4,112.96
Valley Osage Oil Co., Tulsa	18,449.07	.....	25,363.55
Venmex Oil Co. and Keystone Production Co., Wichita Falls, Tex.	118,595.63	.....	154,063.81
Verland Oil & Gas, Perryman, Md.	.....	.....	5,188.86
W			
Wentz, L. H., Oil Division, Ponca City	230,816.88	.....	388,872.92
Wentz, L. H., Oil Division, Ponca City	.....	Gas	11,762.55
Wentz, L. H., Oil Division, Ponca City	.....	.....	2,546.28
Wilcox, H. F., Oil & Gas Co., Tulsa	215,703.77	.....	320,144.30
Wilcox, H. F., Oil & Gas Co., Tulsa	.....	Gas	13,054.20
Wilcox, H. F., Oil & Gas Co. (suspense),* Tulsa	.....	.....	35,327.33
Wolverine Petroleum Corp., St. Louis, Mo.	171,870.64	.....	235,084.71
Wolverine Petroleum Corp., St. Louis, Mo.	.....	302,621	18,394.20
Western Oklahoma Gas Co., Fort Smith, Ark.	.....	73,231	7,323.10
Western States Royalty Co.,* Great Falls, Mont.	.....	.....	2,799.65
Western Counties Gas Co., Tulsa	.....	174,262	10,455.71
Westerly Oil Co., Bartlesville	4,555.86	.....	7,165.26
Washington Royalties Co.,* Bartlesville	8,340.69	.....	13,635.14
Westheimer and Daube, Ardmore	138,046.95	.....	194,163.07
Westheimer and Daube,* Ardmore	15,291.25	.....	19,947.33
Westland Oil Corp., Tulsa	32,619.59	51,188	52,298.39
White Eagle Oil & Ref. Co., Wichita, Kans.	81,215.07	37,750	129,467.16
Woods, Roy,* Oklahoma City	.....	.....	21,113.74
Woods, W. E.,* Cox City	.....	.....	3,363.95
Wood-Gilbert-Wood Synd., Oklahoma City	.....	.....	13,497.97
Wood Oil Co., Tulsa	.....	.....	8,994.36
Warner-Quinlan Co. of Texas, Dallas, Tex.	4,115.20	.....	6,686.39
Wiser Oil Co., Sistersville, W. Va.	98,571.55	.....	130,417.56
Winona Oil Co. of Delaware, Tulsa	11,308.29	.....	17,846.92
Winona Oil Co. of Delaware, Tulsa	22,949.25	.....	39,060.43
Wise and Jackson, Sapulpa	12,811.43	.....	18,210.98
Whitehill, H. J. and H. C. Weible, Tulsa	10,965.94	.....	15,045.38
Whitehill Oil Corp., Tulsa	14,782.85	.....	19,437.99
Whitehill Oil Corp.,* Tulsa	1,806.14	.....	2,726.16
Wilson, Irvin L.,* Wewoka	.....	.....	9,766.19
Wilson, Benton,* Greenfield, Md.	.....	.....	5,087.88
Williams, Joseph,* Marshall	.....	.....	4,762.03
Walker, E. A.,* Oklahoma City	.....	.....	22,658.65
Walcott, C. W., Gdn.,* Coweta	.....	.....	2,907.23
Wilborn, S. A.,* Sulphur	.....	.....	10,405.85
Wham, L. F.,* Duncan	.....	.....	2,092.56
Wheeler, John W.,* Oklahoma City	.....	.....	3,684.89
Wright, Archie K.,* Muskogee	.....	.....	2,635.83
Wright, James,* Bristow	.....	.....	3,769.75
Watchorn Oil & Gas, Oklahoma City	7,759.25	.....	12,762.16
Westerveit-Noble Oil & Gas, Oklahoma City	.....	88,992	8,899.26
Wellsville Oil Co., Wellsville, N. Y.	10,793.93	.....	14,611.72
Wirick, H. L., & Co., Inc.,* Okmulgee	.....	.....	5,263.34
Wittmer Oil & Gas Properties, Pittsburgh, Pa.	4,286.33	9,120	7,200.32
Witwer, L. H.,* Tulsa	.....	.....	2,702.31
Wigton and Long, Okmulgee	.....	Gas	5,136.04
Welsh, J. L., Blackwell	.....	.....	2,672.23
Weeks, Margaret S., Ardmore	5,376.40	.....	7,428.83
Weeks, Margaret S., Ardmore	.....	40,572	3,993.95
Ward, B. F., Exec., Wilson	4,515.40	.....	5,901.87
Wright, J. H., estate, Sapulpa	12,250.75	29,865	19,151.57
Willmott, John W.,* San Diego, Calif.	.....	.....	22,653.51
Wiess, H. C., Houston, Tex.	2,286.59	12,071	4,428.13
Winkler & McQueen, Inc., Duncan	8,783.75	.....	12,287.33
Winkler & McQueen, Inc., Duncan	.....	Gas	.....
Wallace, J. E., Okmulgee	.....	.....	14,724.50
Wallace, W. L.,* Shawnee	.....	.....	3,002.20
Welsh, Carrie B.,* Blackwell	1,550.01	.....	2,633.94
Wheeler, G. L., Oklahoma City	.....	.....	2,689.60
Wheeler, G. L., Oklahoma City	2,350.34	.....	3,645.86
Watson, Nell Evans,* Bristow	.....	.....	3,415.45
Woodworth, W. W.,* Ringling	2,205.08	.....	2,546.77
Wagner, Ruth A.,* Shidler	.....	.....	3,163.32
Walsh Oil Co., Tulsa	5,880.06	.....	7,890.87
Watson, J. T., Brownsville, Tex.	.....	.....	2,116.64
Warner-Caldwell Oil Co., Titusville, Pa.	22,292.76	.....	29,574.74
Walker, C. C. and Jessie,* Okemah	.....	.....	5,319.04
Y			
Youngblood, L. S., trustee,* Wewoka	.....	.....	7,605.79
York Petroleum Co.,* Muskogee	16,653.74	.....	26,619.14
Youts, E. H.,* Shawnee	.....	.....	7,450.98
Young, L. W.,* Oklahoma City	.....	.....	6,657.40
Young, J. Wright,* Broken Arrow	.....	.....	2,278.86
Z			
Zimmerman, L. W., Chicago, Ill.	29,883.09	.....	33,184.78
Zimmerman, Dora,* Oklahoma City	.....	.....	2,398.91

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 54)

The Texas Co.'s No. 2 Peyton, 990 ft. N, 330 ft. W, SE cor., Sec. 25-23-12 ..... Derrick; reported drlg. in error.

The Texas Co.'s No. 4 Peyton, 990 ft. E, 330 ft. N, SW cor., Sec. 30-23-11 ..... Location.

The Texas Co.'s No. 1 J. W. Wilkinson, 660 ft. N, 660 ft. W, SE cor. NE, Sec. 36-23-12 ..... Cmtd. 4½-in. 3,134 ft; 1-ft. sand; T.D. 3,136 ft.

The Texas Co.'s No. 3 Wilkinson, 990 ft. S, 330 ft. E, NW cor., Sec. 31-23-11 ..... Derrick.

The Texas Co.'s No. 4 Wilkinson, 330 ft. S, 330 ft. E, NW cor., Sec. 31-23-11 ..... Location.

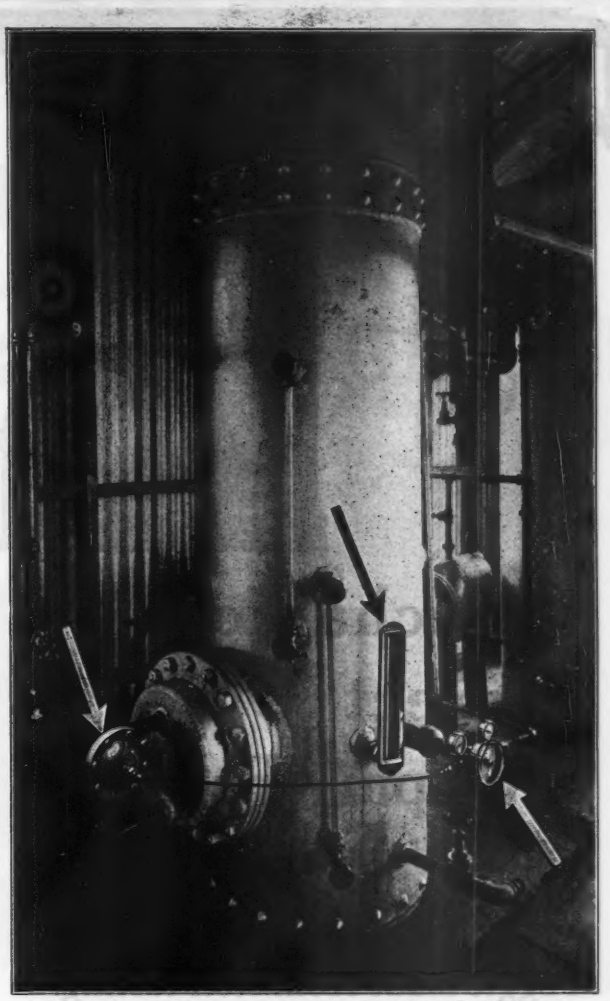
Tippett et als' No. 1 Holmes, 200 ft. S, 200 ft. W, NE cor. NE NW, Sec. 36-23-12 ..... Location.

John Woodley et als' No. 2 L. & A., 990 ft. N, 990 ft. W, SE cor., Sec. 14-23-12 ..... Completed Mar. 30, '26, flowing 200 bbls. fluid, 80% S.W; 4-ft. sand; T.D. 3,081 ft; rigging up to deepen.

Woodley et als' No. 1 Roberson, 330 ft. N, 330 ft. W, SE cor. SW NE, Sec. 22-23-12 ..... Rig up.

CADDO PARISH—GREENWOOD

Calatex O & G. Co.'s No. 1 Taylor Trosper, 2,519 ft. S, 1,393 ft. E, CWL, Sec. 7-16-16 ..... Began drlg. Feb. 17; cmtd. 10-in. 140 ft.



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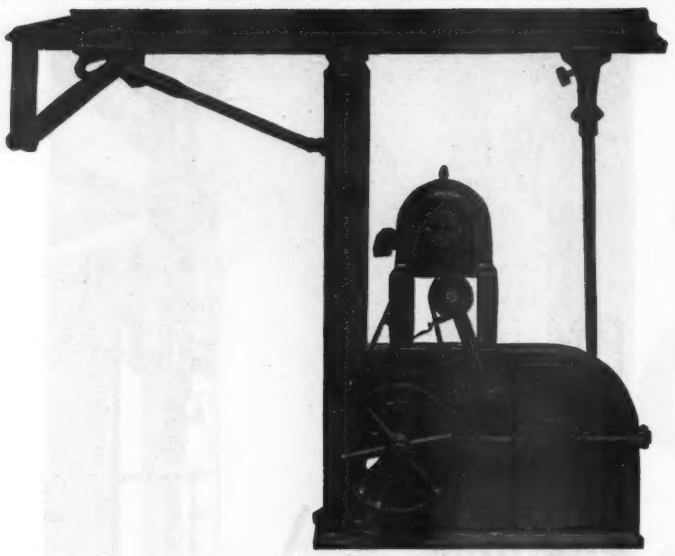

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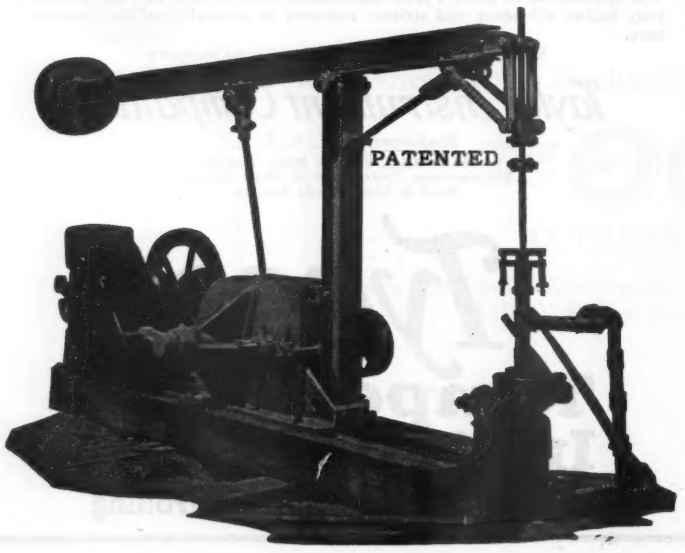

CADDO PARISH—HOSSTON

Bayou State Oil Corp.'s No. 1 Barr, 450 ft. S, 650 ft. W, NE cor. NW SE, Sec. 30-22-15 ..... Cmtd. 6-in. 1,060 ft; drlg. plug.
Bayou State Oil Corp.'s No. 29 Jolly, 425 ft. W, 775 ft. N, SE cor. NE ..... Completed Jan. 21; production 10 bbl., 1,003 ft.

CADDO PARISH—DIXIE

Dixie Oil Co.'s No. 1 B. Dickson, 300 ft. N, 300 ft. E, SW cor., Sec. 10-19-14 ..... Location.
Sam Gold's No. 3 Hunter, 660 ft. N, 660 ft. W, SE cor. SW NE, Sec. 17-19-14 ..... 200 ft. oil and S.W. in hole 2,457 ft; W.O.S.R; topped broken sand 2,415 ft.
Lide et als' No. 1 Dickson heirs, 795 ft. N, 200 ft. E, SW cor., Sec. 10-19-14 ..... Cmtd. 6⅝-in. 2,400 ft; W.O.S.R. 250 ft. oil; T.D. 2,458 ft.

CADDO PARISH—MOORINGSPORT DISTRICT

Falcon Oil Co.'s No. 2 Nunnely, 3,012 ft. N, 3,091 ft. E, SW cor., Sec. 29-20-15 ..... Cmtd. 8-in. 840 ft; drlg. 1,600 ft.

CADDO PARISH—OIL CITY

Gulf Ref. Co.'s No. 24-A Levee Board, 200 ft. S, 200 ft. W, NE cor. SW NW, Sec. 34-21-16 ..... Derrick.
H. M. Matson's No. 1 U. S. Govt., 900 ft. E, 400 ft. S, NW cor., Sec. ..... Drlg. sand rock 1,940 ft.
The Texas Co.'s No. 72 Levee Board, 725 ft. N, 210 ft. E, SW cor. SE, Sec. 27-21-16 ..... Rigging up.
The Texas Co.'s No. 73 Levee Board, 1,642 ft. E, 780 ft. N, SW cor. SW SE, Sec. 27-21-16 ..... Location.
Thomason & Fitzsimmons' No. 1 Howell, 600 ft. S, 300 ft. W, NE cor. SE, Sec. 13-22-16 ..... Tested S.W. 2,446 ft; drlg. 2,550 ft.

PINE ISLAND

Shreveport Oil Corp.'s No. 4 Hicks, Sec. 32-19-15 ..... Drlg. chalk 1,425 ft.

CLAIBORNE PARISH—HOMER

Oakes et als' No. 1 Richardson, NE SE, Sec. 19-21-17 .. S.D. 1,700 ft.

LA SALLE PARISH—URANIA

Ark. Fuel Oil Co.'s No. 5 Urania, 200 ft. S, 200 ft. E, NW cor. NE SE, Sec. 24-10-1e ..... Arranging to cmt. 8¼-in. 4,520 ft.
Gulf States Gas Co.'s No. 1 Urania, 250 ft. W, 150 ft. S, NE cor., Sec. 1-10-1e ..... S.D. 800 ft.
Hope Oil Co.'s No. 5 Urania, 660 ft. E, 150 ft. S, NW cor. SW SW, Sec. 19-10-2e ..... Derrick.
Kinney, Hardtner & Randall's No. 1 Kinney, SW SW, Sec. 7-10-2e ..... S.D. 1,570 ft.
S. D. Ray's No. 1 Urania, Sec. 19-10-2e ..... 1,200 ft. oil, some S.W; 3-ft. sand; W.O.S.R. 1,568 ft.

MOREHOUSE PARISH

Bahan & Bahan's No. 3 Feazel, 990 ft. S, 990 ft. W, NE cor., Sec. 3-20-4 ..... Cmtd. 6-in. 2,088 ft.
Bahan & Bahan's No. 4 Feazel, 900 ft. W, 330 ft. S, NE cor., Sec. 3-20-4 ..... Location.
Consolidated Carbon Co.'s No. 2 White, Sec. 16-20-4 .... Drlg. gas rock 2,131 ft.
J. S. Herkness' No. 12 Bowles, 3,392 ft. E, 3,300 ft. S, NW cor., Sec. 18-20-5 ..... D.S. test 4-ft. broken sand 2,385 ft; dry; top anhydrite 2,412 ft; drlg 2,435 ft; D.S. test 2,492 ft; S.W; arranging to deepen.
Magnolia Pet. Co.'s No. 8 U. S. Govt., 310 ft. S, 410 ft. E, NW cor., Lot 4, Sec. 33-21-5 ..... S.D. account high wtr; T.D. 204 ft.
Nat. Gas Prod. Co.'s No. 25 Crossett Lbr. Co., 1,444 ft. S, 793 ft. W, NE cor. NW, Sec. 29-21-5 ..... Cmtd. 6-in. 2,210 ft.
J. A. Noe et als' No. 1 Wright, 694 ft. N, 393 ft. W, C, Sec. 27-20-4 ..... Cmtd. 8-in. 751 ft.
Southern Carbon Co.'s No. 14 Tensas, 660 ft. N, 660 ft. E, SW cor. NW, Sec. 34-21-4 ..... S.D. account high wtr; T.D. 2,081 ft.

OUACHITA PARISH

Amalgamated Carbon Co.'s No. 2 Cole, 742 ft. E, 703 ft. S, NW cor., Sec. 43-19-4 ..... Cmtd. 6-in. 2,112 ft.
Chauvin Gas Co.'s No. 4 Slagle Johnson, 647 ft. W, 2,503 ft. S, NE cor., Sec. 47-18-4 ..... Rig up.
Hope Prod. Co.'s No. 2 Fairbanks, 1,876 ft. E, 628 ft. N, SW cor. SE, Sec. 25-20-4 ..... Location.
Hope Prod. Co.'s No. 3 Fairbanks, 1,876 ft. E, 628 ft. S, NW cor. NE, Sec. 36-20-4 ..... Location.
G. E. Jordan's No. 1 Anding, NW NE, Sec. 18-18-5 ..... Plugging back to 2,234 ft; T.D. 2,430 ft.
La. Gas & Fuel Co.'s No. 1 Beard, Sec. 46-18-4 ..... Cmtd. 6-in. 2,143 ft.
Magnolia Pet. Co.'s No. 2 fee 401, 660 ft. S, 660 ft. E, NW cor., Sec. 2-18-3 ..... Derrick.
New Process Carbon Co.'s No. 2 Cole, 1,971 ft. E, 1,830 ft. N, SW cor., Sec. 35-20-4 ..... Plugged back to 2,175 ft. and arranging to test; estimated 10,000,000 ft. gas; T.D. 2,357 ft.
Sho-Van Gas Products Co.'s No. 3 W. Va., 1,980 ft. S and W, NE cor., Sec. 3-18-4 ..... Cmtd. 6-in. 2,145 ft.
Sho-Van Gas Products Co.'s No. 4 W. Va., 1,078 ft. N, 294 ft. W, NE cor., Sec. 49, in Sec. 7 ..... Rig up.
Union Gas Products Co.'s No. 1 Hare, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 33-19-5 ..... D.S. test 2,565 ft; dry; W.O.
United Oil & Nat. Gas Products Co. of La.'s No. 5 Guthrie, 6,896 ft. N, 6,022 ft. W, cor. Secs. 49, 36, and 25, Sec. 49-20-5 ..... Derrick.
United Carbon Co.'s No. 2 Puckett, 660 ft. N, 660 ft. E, SW cor. SW, Sec. 15-19-5 ..... Drill stem stuck; T.D. 2,459 ft; fishing.
United Carbon Co.'s No. 4 Spade, 774 ft. S, 2,031 ft. E, NW cor., Sec. 6-18-4 ..... S.D. 2,040 ft.
United Carbon Co.'s No. 6 Spade, 1,180 ft. S, 140 ft. E, NW cor., Sec. 27-19-4 ..... Location.
United O. & N. G. Co.'s No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 26-20-4 ..... Derrick.

RICHLAND PARISH

Ark.-La P. L. Co.'s No. 3-B E. A. and F. B. Sartor, 300 ft. N, 330 ft. E, SW cor., Sec. 24-16-5 ..... Rig up.
W. C. Feazel's No. 1 R. B. Simon, 2,406 ft. W, 2,020 ft. S, NE cor., Sec. 11-16-6 ..... Rig up.
Franklin O. & G. Co.'s No. 1 F. Smith, Sec. 24-16-6 .... Bailing 6-in. csg; T.D. 2,283 ft.
International Gas Products Co.'s No. 1-B Beck, 660 ft. S, 713 ft. E, NW cor., Sec. 36-16-6 ..... Drlg. 6-in. plug; T.D. 2,285 ft.
International Gas Products Co.'s No. 1 Minnie LaGrone, 769 ft. N, 858 ft. E, SW cor., Sec. 7-16-7 ..... Location.
La. G. & F. Co.'s No. 1 Chapman, 2,497 ft. E, 1,980 ft. S, NW cor., Sec. 36-16-6 ..... Drlg. 1,818 ft.
M. L. Meredith's No. 1 Holdness, 1,980 ft. S, 990 ft. W, NE cor., Sec. 15-16-6 ..... Drlg. 6-in. plug; T.D. 2,282 ft.
Nat. Gas Products Co.'s No. 1-C Sartor, 536 ft. N, 1,333 ft. E, SW cor. NW, Sec. 21-16-6 ..... Cmtng. 8-in. csg. 865 ft.
Palmer Corp.'s No. 1-A F. N. Boykin, 660 ft. N, 660 ft. W, SE cor. NE, Sec. 20-17-6 ..... Cmtd. 6⅝-in. 2,300 ft.
Palmer Corp.'s No. 1-A Earl, Sec. 2-16-6 ..... Reported Jan. 22; blowout; estimated 45,000,000 ft. gas 2,498 ft; arranging to cmt. 4½-in.
Southern Carbon Co.'s No. 1 Hale, 660 ft. N, 760 ft. W, SE cor., Sec. 16-16-6 ..... Flowed S.W; arranging to recmt. 6-in; T.D. 2,460 ft.
Southern Carbon Co.'s No. 1 Lindow, 3,300 ft. W, 1,320 ft. S, NE cor., Sec. 16-16-6 ..... Location.
Southern Carbon Co.'s No. 1 McCoy, 1,980 ft. E, 3,300 ft. S, NE cor., Sec. 16-16-6 ..... Cmtd. 8-in. 830 ft.
United Carbon Co.'s No. 1 D. R. Sartor, 3,341 ft. W, 3,960 ft. S, NE cor., Sec. 11-16-6 ..... Drlg. gummy shale and boulders 1,935 ft.

SABINE PARISH—PLEASANT HILL

Ark. Fuel Oil Co.'s No. 4 Horne, 370 ft. S, 450 ft. W, NE cor. SW, Sec. 33-10-12 ..... Rig up.
Bridges-Clarke Oil Co.'s No. 1 Guy, 300 ft. N, 300 ft. E, SW cor. SE SE, Sec. 33-10-13 ..... Cmtd. short string 5 3/16-in. 3,107 ft.

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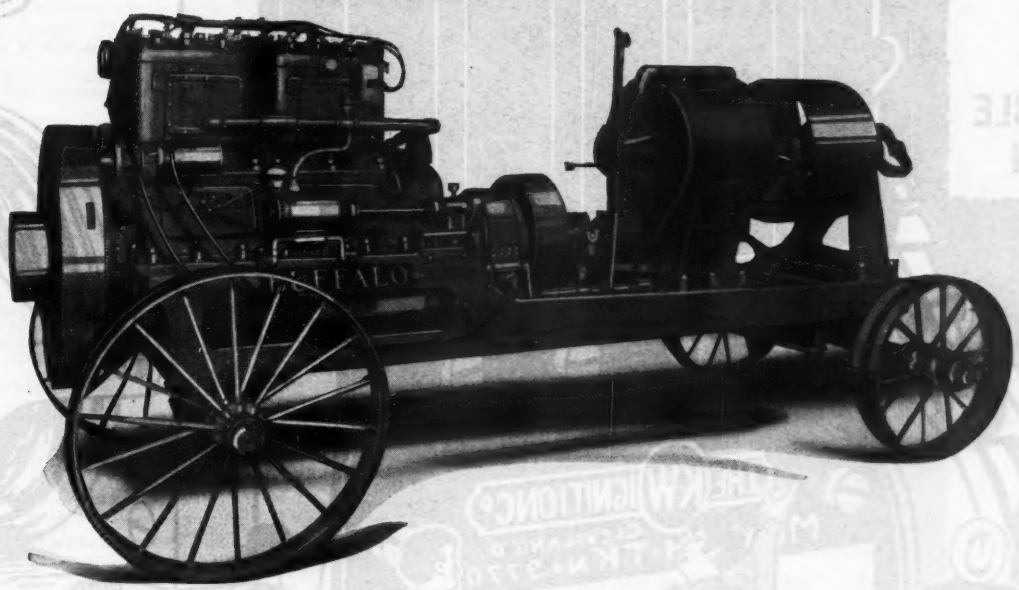

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OKLAHOMA-TEXAS REPRESENTATIVES

MORRISON & JACKSON
HOLLIDAY TEXAS

GULF COAST FIELDS AND WILDCATS

(Continued from Page 56)

BOLING—FORT BEND AND WHARTON

Houston Gulf Gas Co.'s No. 1 Fields (northwest)..... Total depth 4,277 ft. in heaving shale; set 9⅝-in. casing 4,000 ft.

RACCOON BEND—AUSTIN COUNTY

Humble & Valley's No. 5 Austin College ..... Comp. flowing 100 bbls. 3,178 ft.
Humble Oil & Refg. Co.'s No. 8-B Deutrich ..... Drlg. shale 2,027 ft.
Humble & Valley's No. 9-A Deutrich ..... Shut down 3,200 ft.
Humble & Valley's No. 1 Duncan, State land ..... Drlg. sticky shale 2,922 ft.
Humble & Valley's No. 6 Gotosky ..... Shut down 3,177 ft.
Humble & Valley's No. 3 Helmuth ..... Cemented surface pipe 87 ft.
Humble & Valleys No. 1-B Macnamehi ..... Shut down 3,602 ft.
Humble & Valley's No. 1-C Mitchell ..... Location.
Humble & Valley's No. 6 Mueller ..... Rigging up to pump 3,270 ft.
Humble & Valley's No. 6 Thompson ..... Cemented surface pipe 67 ft.
Humble & Valley's No. 7 Thompson ..... Derrick.
Humble & Valley's No. 7 Urban ..... Standing 1,165 ft.
Humble & Valley's No. 7-A Walton ..... Shut down 1,605 ft.
Humble & Valley's No. 3-A Washington ..... Drlg. sand and shale 3,464 ft.
Humble & Valley's No. 4 Woodley ..... Drlg. shale 1,284 ft.
Humble & Valley's No. 5 Woodley ..... Drlg. sandy shale 3,323 ft.

DE WALT—FORT BEND COUNTY

Humble Oil & Refining Co.'s No. 2-B Bankers Mortgage.. Comp. flowing 600 bbls. oil 3,727 ft.
Humble Oil & Refining Co.'s No. 3-B Bankers Mortgage.. Derrick.
Humble Oil & Refg. Co.'s No. 9 Hamner fee ..... Location.
Humble Oil & Refg. Co.'s No. 13 Sugarland ..... Rig.
Humble Oil & Refg. Co.'s No. 3-B Sugarland ..... Cemented casing to test sandy shale 3,773 ft.
Humble Oil & Refg. Co.'s No. 9 Nelson ..... Drlg. sand and lime 1,005 ft.

HUMBLE—HARRIS COUNTY

John Deering's No. 5 Bissonet ..... Set 46 ft. screen 4,039 ft.; comp. flowing 1,700 bbls. oil.
Houtex Oil Co.'s No. 1 O'Boyle (west) ..... Rig.
Humble Oil & Refg. Co.'s No. 8 Williams (south) ..... Set 867 ft. screen; comp. flowing 950 bbls. oil 5,162 ft.
Humble Oil & Refining Co.'s No. 11 Williams (south) ... Location.
Humble Oil & Refining Co.'s No. 2 Trahon (south) ..... Comp. flowing 280 bbls. oil 5,195 ft.
Rio Bravo Oil Co.'s No. 1 fee, west ..... Drlg. shale and lime 100 ft.
South Texas Petroleum Co.'s No. 14 Morris, south ..... Cemented casing to test 4,531 ft.
South Texas Petroleum Co.'s No. 3 Lee ..... Drlg. hard shale 4,910 ft.
South Texas Petroleum Co.'s No. 4 Lee (south) ..... Location.
Cullen & West's No. 2 Burt (east) ..... Drlg. shale and lime 1,473 ft.
Sun Oil Co.'s No. 4 Bender (west) ..... Drlg. sand and boulders 1,061 ft.
The Texas Company's No. 1 Atlantic & Gulf, southeast .. Drlg. sand and boulders 1,846 ft.
The Texas Company's No. 36 Kohler, northeast ..... To set casing to test 4,857 ft.
The Texas Company's No. 24 House, north ..... Rig.

BLUE RIDGE—FORT BEND COUNTY

Humphreys Corp.'s No. 1 West-Schenck (workover) ..... Drilling.
Sinclair Oil & Gas Co.'s No. 1 Blakely ..... Drlg. sand and boulders 833 ft.
Sinclair Oil & Gas Co.'s No. 4 Blakely (workover) ..... Rigging up to deepen.

PIERCE JUNCTION—HARRIS COUNTY

Anderson & Plummer's No. 6 Whitehead (workover) ... No report.
Mariand Oil Co.'s No. 2 Prudential (workover) ..... No report.
Navarro Oil Co. and Texas Exploration Co.'s No. 18 Dooley ..... Drlg. gumbo and lime 3,040 ft.
Pure Oil Co.'s No. 1 Herman (workover) ..... Swabbed salt water 4,981 ft.; standing.
Pure Oil Co.'s No. 2 Herman, southwest ..... Drlg. gumbo and boulders 1,470 ft.
Rio Bravo Oil Co.'s No. 11-B Settegast ..... Comp. flowing 1,845 bbls. 3,694 ft.
Rio Bravo Oil Co.'s No. 13-A Settegast (workover) ..... Cleaning hole to deepen.
Rio Bravo Oil Co.'s No. 18-A Settegast, west ..... Derrick.
Saxet Gas Co.'s No. 5 Herman (southwest) ..... Set screen 4,161 ft.; failed to flow; to deepen.
Saxet Gas Co.'s No. 6 Herman, southwest ..... Standing.
Saxet Gas Co.'s No. 7 Herman, southwest ..... Derrick.
Superior Oil Co.'s No. 3-A Whitehead ..... Drlg. sand 4,587 ft.

LIBERTY—LIBERTY COUNTY

Empire Gas & Fuel Co.'s No. 11 Groggan ..... Drlg. gumbo 2,650 ft.
Sun Oil Co.'s No. 54 Mitchell ..... Abandoned.
The Texas Company's No. 6 Green, northwest ..... Waiting derrick.
Vacuum Oil Co.'s No. 1 Clarion, shallow pool ..... Abandoned in salt 1,482 ft.

HULL—LIBERTY COUNTY

W. B. Flynn's No. 3 Harrison (workover) ..... No report.
Empire Gas & Fuel Co.'s No. 11 Barngrover (workover).. Comp. flowing 500 bbls. oil 3,699 ft.
Empire Gas & Fuel Co.'s No. 31 Barngrover ..... Rig.
Ocean Springs Oil Co.'s No. 1-H Palmer ..... No report.
Republic Production Co.'s No. 57 Dolbear (workover) .... No report.
Republic Production Co.'s No. 122 Dolbear ..... No report.
The Texas Company's No. 1 Barrow fee ..... Location.
The Texas Company's No. 8 Hannah-Vacuum ..... Resuming drilling 4,619 ft.

BIG CREEK—FORT BEND COUNTY

Benedum & Trees' No. 1 J. F. Ahlers ..... Derrick.
Benedum & Trees' No. 1 Moore ..... Heaving shale 4,179 ft.; trying to set 6⅝-in. casing.
Navarro Oil Co.'s No. 4 Hausler ..... Derrick.
The Texas Company's No. 4 fee (workover) ..... Gumbo and lime 2,100 ft.
Drlg. sand, shale and lime 3,807 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 9 Mayes ..... Comp. flowing 675 bbls. pipe line oil 2,832 ft.; three-eighths-in. choke.
Pure Oil Co.'s No. 10 Mayes ..... Drlg. gumbo 1,597 ft.
Pure Oil Co.'s No. 4 Lost Lake ..... Drlg. gumbo 1,484 ft.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 26 Wisdom ..... Total depth 5,826 ft.; pulling screen to deepen.

BATSON—HARDIN COUNTY

Ada Belle Oil Co.'s No. 133 Sun ..... No report.
East Batson Oil Co.'s No. 9 Bates ..... No report.
D. L. Williams' No. 1 Fee ..... Abandoned 275 ft.

SOUR LAKE—HARDIN COUNTY

Lake View Oil Co.'s No. 8 Minor ..... No report.
Gilbert Oil Co.'s No. 107 Gilbert..... Derrick.
M. E. Peveto's No. 1 Merchant ..... No report.
The Texas Company's No. 305 fee ..... Drlg. shale 449 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 81 Cotton ..... Drlg. sticky shale 385 ft.

GOOSE CREEK—HARRIS COUNTY

Humble Oil & Refg. Co.'s No. 77 Simms-Smith ..... Drlg. sticky shale 4,584 ft.
Jim McMurry's No. 4 Grace Addey ..... Rig.

SPINDLETOP—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 48 McFaddin (workover) ..... Drlg. sand 2,762 ft.
Yount Lee Oil Co.'s No. 97 McFaddin (workover) ..... Drlg. shale and lime 4,359 ft.
Yount Lee Oil Co.'s No. 118 McFaddin (workover) ..... Drlg. sand and lime 4,731 ft.
Yount Lee Oil Co.'s No. 123 McFaddin ..... Comp. flowing 900 bbls. 4,475 ft.
Yount Lee Oil Co.'s No. 124 McFaddin ..... Drlg. shale and lime 3,456 ft.
Yount Lee Oil Co.'s No. 125 McFaddin ..... Drlg. shale and lime 2,351 ft.
Yount Lee Oil Co.'s No. 126 McFaddin ..... Drlg. 2,600 ft.
Yount Lee Oil Co.'s No. 99 Gladys City ..... Drlg. sand rock 2,816 ft.
Yount Lee Oil Co.'s No. 13 Gladys City (workover) ..... Abandoned.
Yount Lee Oil Co.'s No. 99 Gladys City ..... Drlg. 4,179 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Saxet Oil Co.'s No. 3 Hogg ..... Derrick.
The Texas Company's No. 26 Arnold ..... Cemented 6⅝-in. casing 2,666 ft.

NORTH DAYTON—LIBERTY COUNTY

John A. Deering's No. 6 fee ..... Standing.
Humble Oil & Refining Co.'s No. 1 Jamison, south ..... Sandy shale showing oil 4,371 ft.; set casing.
Harrison Oil Co.'s No. 1 Jamison ..... Drlg. shale 4,218 ft.
Harvey Smith's No. 1 Simmons & Brown ..... Rig.
The Texas Company's No. 1 Paraffine fee ..... Drlg. sand and boulders 350 ft.

HIGH ISLAND—GALVESTON COUNTY

Gulf Production Co.'s No. 5-A Smith ..... Fishing drill stem 4,535 ft.
Marrs McLean's No. 12 Cade (workover) ..... Comp. flowing 600 bbls. fluid 60 per cent salt water 4,320 ft.
Marrs McLean's No. 17 Cade ..... Set screen 4,311 ft.; bailed mud and sediment.
Tom C. Patten's No. 1 Jackson ..... Derrick.

ORCHARD—FORT BEND COUNTY

Gulf Production Co.'s No. 20 Moore ..... Drlg. 3,591 ft.

REFUGIO—REFUGIO COUNTY

Fox-Heflin's No. 1 Fannie Heard ..... Spudded.
Hamil Drilling Co.'s No. 1 Cable ..... Derrick.
Herman F. Heep's No. 1 Vance ..... Drlg. shale 2,209 ft.
Houston Gulf Gas Co.'s No. 1 Lambert ..... Drlg. plug 5,872 ft. to test sand 5,879-84 ft.
Houston Gulf Gas Co.'s No. 2 Lambert ..... Drlg. sticky shale and hard lime 1,877 ft.
Houston Gulf Gas Co.'s No. 3 Cummings ..... Comp. flowing 200 bbls. oil 3,637-51 ft.
Houston Gulf Gas Co.'s No. 3 Morgan Shelley ..... Shut down 22 ft.
Houston Gulf Gas Co.'s No. 3 Morgan-Vance ..... Derrick.
Houston Gulf Gas Co.'s No. 6 O'Brien ..... Comp. dry gas well 3,683 ft.
Houston Gulf Gas Co.'s No. 9 T. P. Shelly ..... Tested salt water; sand 3,660-71 ft.; total depth 3,692 ft.
Houston Oil Co.'s No. 1 Rooke Hotel ..... Oil sand 3,681-91 ft.; cemented casing 3,683 ft.
Houston Oil Co.'s No. 14 Rooke ..... Rig.
Houston Oil Co.'s No. 1 Tom Heard ..... Drlg. shale and lime 2,302 ft.
Houston Oil Co.'s No. 1 Carlysle ..... Sand showing oil 3,695-3,711 ft.; to set casing.
Houston Oil Co.'s No. 1 Shelton ..... Cemented 12½-in. casing 486 ft.
Houston Oil Co.'s No. 1 Dorsey ..... Cemented 12½-in. casing 507 ft.
Houston Oil Co.'s No. 1 Doughty ..... Rig.
Houston Oil Co.'s No. 9 Fannie Heard (workover) ..... Rig up to deepen 1,567 ft.
Independent Oil & Gas Co.'s No. 1-C Heard ..... Cemented 12½-in. casing 417 ft.
Independent Oil & Gas Co.'s No. 3 Claude Heard ..... Drlg. rock 362 ft.
Independent Oil & Gas Co.'s No. 1 T. P. Shelley ..... Tested salt water 5,488-93 ft.; plugged to 5,488 ft.
Independent Oil & Gas Co.'s No. 1 Huddleston ..... Location.
Independent Oil & Gas Co.'s No. 1 Mercy Academy ..... Cemented 12½-in. casing 1,180 ft.
Independent Oil & Gas Co.'s No. 1 Helen Reilly ..... Drlg. gumbo 2,454 ft.
Independent Oil & Gas Co.'s No. 6 Reilly ..... Cored water sand 3,686-89 ft.; plugged to 3,683 ft.
Independent Oil & Gas Co.'s No. 2 West ..... Rig.
Karona Oil Co.'s No. 1 Zarsky ..... Rig.
Edwin M. Jones' No. 1-A Leisering ..... Oil sand 3,673-81 ft.; cemented 6⅝-in. casing.
Edwin M. Jones' No. 1-A J. F. B. Heard ..... Drlg. sandy shale 1,176 ft.
Edwin M. Jones' No. 1-A Mitchell ..... Location.
Edwin M. Jones' No. 1 Jeter ..... Drlg. sticky shale 2,277 ft.
Larco Oil Co.'s No. 2 Strauch ..... Comp. flowing 1,200 bbls. oil 3,-671-3,706 ft.
Mission Drlg. Co.'s No. 1 O'Brien ..... Cemented 12½-in. casing 557 ft.
Mission Drlg. Co.'s No. 1 Moss ..... Drlg. shale and lime 3,331 ft.
T. P. Morgan's No. 1 City ..... Derrick.
Morgan & Morgan's No. 1 Rooke ..... Drlg. broken lime 4,475 ft.
Morgan Oil Corp.'s No. 1 Swift ..... Comp. flowing 600 bbls. oil 3,696 ft.
Morgan Oil Corp.'s No. 5 City ..... Drlg. sand rock 1,988 ft.
Morgan Oil Corp.'s No. 1 Hornburg ..... Swabbed salt water 3,681-87 ft.
Morgan Oil Corp.'s No. 1 Fox, Block 70 ..... Drlg. sandy shale 685 ft.
Morgan Oil Corp.'s No. 1 Tom Heard ..... Drlg. broken shale and lime 4,901 ft.
Morgan Oil Corp.'s No. 1 Carlysle, Block 2 ..... Drlg. shale 3,718 ft.
Morgan Oil Corp.'s No. 1 Powers ..... Drlg. hard lime 2,052 ft.
Pearson Properties' No. 1 Ryalls ..... Drlg. sandy shale and lime 4,115 ft.
Ed Price et al's No. 1 Mission River ..... Drlg. sticky shale 1,959 ft.
Refugio Oil Corp.'s No. 1 Wheeler heirs ..... Sidetracked and drlg. shale 3,039 ft.
Rutherford-Traylor Oil Co.'s No. 1 Cable ..... Derrick.
Saxet Oil Co.'s No. 2 Cable ..... Standing partly rigged.
Saxet Oil Co.'s No. 2 Ryals ..... Location.
Saxet Oil Co.'s No. 3 Holmes Heard (old well) ..... Shale and lime 5,103 ft.; drill stem stuck.
Sun Oil Co.'s No. 3 Buckley, Lot 5, Blk. 2 ..... Oil sand 3,670-93 ft.; cemented 8¼-in. casing 3,670 ft.
The Texas Company's No. 1 Shelton ..... Drlg. salt water sand 5,508 ft.
Union Prod. Co.'s No. 2 O'Brien ..... Tested salt water; sand 5,554-68 ft.
Union Producing Co.'s No. 3 O'Brien ..... Derrick.
Union Prod. Co.'s No. 1 Tom Heard, Block 3 ..... Rig.
Union Prod. Co.'s No. 1 Ben Shelton ..... Blew out while coring and blowing wild; total depth 5,800 ft.
Union Prod. Co.'s No. 2 J. F. B. Heard ..... Oil sand 3,663-68 ft.; cemented 8¼-in. casing 3,658 ft.
Union Producing Co.'s No. 3 Powers ..... Derrick.
Union Producing Co.'s No. 1-A Rose Lambert ..... Shut down temporarily for drill pipe 5,005 ft.

SOUTH LOUISIANA FIELDS

LOCKPORT—CALCASIEU PARISH

Vacuum Oil Co. & Gulf Refining Co.'s No. 25 Miller ..... Sandy shale and shell showing oil; cemented 9⅝-in. casing to test.
Vacuum Oil Co. and Gulf Refining Co.'s No. 26 Miller ... Derrick.
Vacuum Oil Co. & Gulf Refining Co.'s No. 27 Miller .... Derrick.
Vacuum Oil Co. & Gulf Refining Co.'s No. 8 Bordages ... Oil sand 4,401 ft.; cemented 7-in. casing to test.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 1 Verdine ..... Drlg. 2,549 ft.
Calcasieu Oil Co.'s No. 5 Caldwell ..... Drlg. 2,325 ft.
Sunshine Oil Co.'s No. 6 Ellender ..... Derrick.
Rex Petroleum Corp.'s No. 1 Duhon ..... Bailed dry; standing.
Rycade Oil Corp.'s No. 1 Gulf Land ..... Drlg. sticky shale 4,332 ft.
Rycade Oil Corp. and Humble's No. 5 Gulf Land ..... Dredging canal to location.
The Texas Company's No. 6 State, Calcasieu Lake ..... Drlg. hard rock 2,255 ft.

JENNINGS—ACADIA PARISH

Cline, Smith & Cline's No. 9 Conklin ..... No report.
The Texas Company's No. 5 Rayne heirs (King tract) .. Drlg. 6,542 ft.
Yount Lee Oil Co.'s No. 1 E. F. Simms (northwest side).. Abandoned 7,310 ft.
Yount Lee Oil Co.'s No. 3 Houssiere-Latrielle, Section 47-9s-2w ..... Drlg. 4,912 ft.
Yount Lee Oil Co.'s No. 6 Crowley ..... Rig.

EDGERLY—CALCASIEU PARISH

Rex Petroleum Co.'s No. 1 Hunter ..... Rig.
Strange Oil Co.'s No. 1 Koonce ..... No report.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 4 Gray (workover) ..... No report.
Vinton Petroleum Co.'s No. 5 Matilda Gray ..... Pulled stuck drill stem 2,692 ft.
Vinton Petroleum Co.'s No. 6 Matilda Gray ..... Location.

BAYOU BOUILLON—ST. MARTIN PARISH

Rycade Oil Corp.'s No. 9 Bouillon fee ..... Drlg. sandy shale 2,536 ft.
Rycade Oil Corp.'s No. 5 Atchafalaya fee ..... Drlg. sandy shale and lime 5,854 ft.
The Texas Company's No. 2 St. Martin Land Co. ..... Drlg. sandy shale 5,039 ft.

STARKS—CALCASIEU PARISH

J. O. Davis' No. 1 Industrial ..... Standing 3,775 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 8 Yount Lee (workover) ..... Drlg. sand and shale 5,569 ft.
Pure Oil Co.'s No. 9 Yount Lee ..... Drlg. sandy shale 3,639 ft.

ANSE LA BUTTE—ST. MARTIN PARISH

Yount Lee Oil Co.'s No. 1 Hebert ..... Drlg. shale 4,449 ft.

SORRENTO—ASCENSION PARISH

Gulf Refining Co.'s No. 17 United Land Co. ..... Drlg. 3,612 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Black Oil Co.'s No. 1 Lancashire, near Sealey ..... Drlg. gumbo 2,054 ft.
O'Hara et al's No. 1 Batla, near Raccoon City ..... Drlg. shale 3,429 ft.
McInnery et al's No. 1 McDay, west of Kinney ..... Shut down 328 ft.

BRAZORIA COUNTY

Faust et al's No. 5 Faust ..... Drlg. gumbo 3,685 ft.
Rucks & Patterson's No. 1 Hunter, southwest of Hoskins.. Drlg. gumbo 826 ft.
Shell Petroleum Corp.'s No. 1 Blakely-Winston, Danbury ..... Drlg. water sand 4,298 ft.
Steel & Strickland's No. 1 Lockridge ..... Rig.
Word Drlg. Co.'s No. 1 Proctor, west of Hoskins Mound.. Drlg. shale and gumbo 1,615 ft.

CHAMBERS COUNTY

Shell Petroleum Corp.'s No. 1 Herff, Moss Bluff ..... Moving in material.

FORT BEND COUNTY

Gulf Production Co.'s No. 1 Brazos Valley, Clodine ..... Drlg. hard sand 4,030 ft.
Pure Oil Co.'s No. 1 Jackson Brown, Barrett and Harris Sur. ..... Location.

GRIMES COUNTY

Cranfill & Reynolds Oil Co.'s No. 1 Baylor, southeast Navasota ..... Rig.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... Drlg. 4,100 ft.
Buffalo Oil Co.'s No. 1 Beall, Eureka ..... Drlg. gumbo and lime 4,257 ft.
A. F. Belunek's No. 1 Thompson ..... Rig.
Cranfill & Reynolds' No. 1 Brown ..... Drlg. sticky shale 5,967 ft.
Higgins Oil & Fuel Co.'s No. 1 Sladous, Mykawa ..... Drlg. sand 5,275 ft.
Humble Oil & Refg. Co.'s No. 7 Warren, Hockley ..... Drlg. sticky shale 3,956 ft.
Humble Oil & Refg. Co.'s No. 2 Minnetex ..... Standing with casing cem. 1,177 ft
Humble Oil & Refg. Co.'s No. 1 Sladous (workover) .... Total depth 4,006 ft.; bailing casing.
Humble Oil & Refg. Co.'s No. 2 Woodburn ..... Total depth 4,904 ft.; sidetracking 4,881 ft.
Rich et al's No. 1 Highlands ..... Derrick.
Martin, Drake & Jones' No. 1 Haney ..... Drlg. shale 2,110 ft.
Watts Brothers' No. 1 Hubert, Mykawa ..... Tested salt water 4,731 ft.; standing.

JEFFERSON COUNTY

Bayou Oil Co.'s No. 1 Hooks-Borduge ..... Location.
Gulf Production Co.'s No. 8 Bordages ..... Total depth 5,592 ft.; drlg. sidetracked hole 5,704 ft.
Gulf Production Co.'s No. 1-A Guy Junker, Fannett .... Drlg. shale and lime 5,389 ft.
Gulf Production Co.'s No. 1-A Thomas, Fannett ..... Abandoned in salt 3,303 ft.
Gulf Production Co.'s No. 13 Thomas, Fannett ..... Drlg. sand and shale 2,187 ft.
Gulf Production Co.'s No. 5 Burrell, Fanette ..... Derrick.
Stilwell Oil Co.'s No. 1 Brinkman ..... Drlg. gumbo 3,370 ft.
The Texas Company's No. 2 Pipkin, Big Hill ..... Washing; total depth 6,010 ft.
The Texas Company's No. 1 Fitzhugh, Big Hill ..... Fishing drill stem and bit; total depth 5,794 ft.
Westbury Oil Co.'s No. 1 West, Choate Survey ..... Drlg. gumbo 2,522 ft.

LIBERTY COUNTY

Gulf Production Co.'s No. 1 Weiser ..... Drlg. shale and sheil 5,910 ft.
Gulf Production Co.'s No. 3 Boyt, Hankamer ..... Drlg. lime and shale 4,466 ft.
Gulf Production Co.'s No. 1 McFaddin, Moss Bluff ..... Shut in producer.
Humble Oil & Refg. Co.'s No. 6 Sterling, Moss Bluff .... Location.
Cranfill & Reynolds Co.'s No. 4-A Esperson, Sheeks ..... Comp. flowing 470 bbls. fluid 35 per cent water, 3,334 ft.
Cranfill & Reynolds Co.'s No. 6-A Esperson, Sheeks ..... Comp. flowing 87 bbls. fluid, 6 per cent water, sand 2,298-2,320 ft.
Cranfill & Reynolds Co.'s No. 7 Esperson, Sheeks ..... Derrick.
Cranfill & Reynolds' No. 2 Davis, Sheeks ..... To test oil sand 2,294-2,304 ft.
Cranfill & Reynolds Co.'s No. 8 Esperson, Sheeks ..... Location.
Cranfill & Reynolds Co.'s No. 9 Esperson, Sheeks ..... Location.
Yount Lee Oil Co.'s No. 2 Moores Bluff, Sheeks ..... Drlg. shale and lime 6,671 ft.

MATAGORDA COUNTY

Cockburn et al's No. 1 Hawkins, Shepherds, Mott ..... Drlg. sand 3,636 ft.

MONTGOMERY COUNTY

Kelley-Kaker's No. 2 Guergus ..... Rig.

ORANGE COUNTY

Gulf Production Co.'s No. 1 J. E. Starks, Port Neches ... Drlg. sand and shale 6,310 ft.
Gulf Production Co.'s No. 1 M. H. Starks, Port Neches ... Location.
The Texas Company's No. 2 Polk, Port Neches ..... Drlg. plug; sand 3,141-46 ft.
Veteran Oil Co.'s No. 1 Reed, A. Nelson Sur. ..... Temporarily abandoned 4,603 ft.

WALLER COUNTY

Kirby Petroleum Co.'s No. 1 Davis, San Felipe ..... Drlg. gumbo and lime 1,908 ft.
W. P. Morris' No. 1 Chapman, Donoho Sur. ..... Shut down 1,867 ft.

SOUTH LOUISIANA

ASCENSION PARISH

Triumph Oil Corp.'s No. 2 Lacey, Sec. 20-10s-4e ..... Temporarily abandoned 4,070 ft.

ASSUMPTION PARISH

Gulf Refining Co.'s No. 1 Armilise, Napoleonville ..... Drlg. 5,096 ft.
Poor Boys Drilling Co.'s No. 1 LeBarre, Sec. 47-12s-13e .. Abandoned derrick.

CALCASIEU PARISH

Wilfred Lahay's No. 2 James ..... No report.

CAMERON PARISH

Shell Petroleum Corp.'s No. 14 Watkins, Black Bayou.... Bldg. derrick.
The Texas Company's No. 5 Calcasieu Lake, Calcasieu Lake Dome ..... Building derrick.
Vacuum Oil Co.'s No. 1 Cameron Meadows, Sec. 21-14s-13w ..... Started drilling.

IBERIA PARISH

The Texas Company's No. 4 Vermillion Bay ..... Drlg. shale and shell 6,057 ft.

IBERVILLE PARISH

Shell Petroleum Corp.'s No. 4 Wilbert, White Castle .... Drlg. sticky shale 1,730 ft.
Standard Oil Co.'s No. 4 Schwing, Bayou Blue..... Rigging up.
Standard Oil Co.'s No. 5 Wilbert, Bayou Blue ..... Derrick.
Standard Oil Co.'s No. 6 Wilbert, Bayou Blue ..... Building derrick.
Standard Oil Co.'s No. 1 Case, Bayou Des Glaise ..... No report.

JEFFERSON DAVIS PARISH

Pure Oil Co.'s No. 1 May, Sec. 1-10s-5w ..... Drlg. sand 3,673 ft.
Yount Lee Oil Co.'s No. 1 Courtney, Welsh ..... Rig.

LA FOURCHE PARISH

Gulf Refining Co.'s No. 25 Stark, Thibodaux ..... Abandoned in salt 5,107 ft.
Gulf Refg. Co.'s No. 1 City of New Orleans, Bay Champagne ..... Drlg. 4,352 ft.

PLAQUEMINE PARISH

Humble Oil & Refg. Co.'s No. 1 Cockrell-Moran, Lake Grand Ecaille ..... Drlg. sandy shale 1,718 ft.
Humble Oil & Refining Co.'s No. 1 Lake Washington, Lake Grand Ecaille ..... Total depth 4,260 ft.; sidetracking 4,215 ft.
The Texas Company's No. 4 State, Garden Island Bay ... Location.

ST. LANDRY PARISH

Elbof Exploration Co.'s No. 1 Ledoux, Eunice..... No report.
Herbert-Baker Oil Co.'s No. 1 Fisher, Section 10-3s-4e... No report.
Gulf Refining Co.'s No. 1 Ovide Lahaye, Port Barre ..... Comp. flowing 2,300 bbls. pipe line oil 3,382 ft.
Gulf Refining Co.'s No. 3 Gaudet, Port Barre ..... Rig.
The Texas Company's No. 4 Botney Bay, Port Barre ..... Comp. flowing 1,500 bbls. oil 3,426 ft.
The Texas Company's No. 5 Botney Bay, Port Barre .... Rig.
The Texas Company's No. 6 Botney Bay, Port Barre .... Location.

ST. MARTIN PARISH

The Texas Company's No. 1 fee, Hager Dome ..... No report.
The Texas Company's No. 3 fee, Hager ..... Location.
The Texas Company's No. 2 St. Martin ..... See Bayou Bouillon.
The Texas Company's No. 1 Iberville, Hager ..... No report.

ST. MARY PARISH

Louisiana Land & Exploration Co.'s No. 2 Clark, Berwick.. No report.
Pure Oil Co.'s No. 1 Wax Lake, Sec. 12-17s-9e ..... Rigging.
Vacuum Oil Co.'s No. 1 Zenor, Patterson ..... Drlg. sticky shale 2,933 ft.

TERREBONNE PARISH

Charles Paggi's No. 2 Evergreen, Sec. 145-15s-16e ..... Shut down.
The Texas Company's No. 4 State-Bay St. Elaine ..... Derrick.
The Texas Company's No. 2 La. L. & E. Co., Dog Lake.. Drlg. shale 6,145 ft.
The Texas Company's No. 2 State, Lake Pelto ..... Location.
The Texas Company's No. 3 State—Lake Pelto..... Oil sand 4,278-4,389 ft.; cemented 9¼-in. casing.
The Texas Company's No. 2 State—Caillou Island..... No report.
The Texas Company's No. 3 State, Caillou Island ..... Location.
The Texas Company's No. 3 State—Lake Barre ..... Drlg. shale 2,684 ft.
The Texas Company's No. 4 State, Lake Barre ..... Location.
The Texas Company's No. 3 L. L. & E. Co., Four Isle .... Location.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 59)

H. H. Wallace et al's No. 2 Duinig in the Justo Esqueda Sur., 5 miles SE from San Antonio ..... T. D. 1,515 ft.; fishing for core barrel.
Moore-Jauer's No. 1 Holly R. Ellison ..... T. D. 1,980 ft.; working to shut off water.

BROOKS COUNTY

Amos Dinn, trustee's No. 3 Garcia-Ramos, Share B-1, Las Mestenas y Gonzales grant, 1,300 ft. S line, 2,325 ft. W line of Share B-1 ..... T. D. 1,655 ft.; standing.
Humble Oil & Ref. Co. and Shell Pet. Corp.'s No. 1 Singer, Alta Verde Subd., 2,500 ft. S and N line, 333 ft. W and E line of Section 312 ..... T. D. 2,481 ft.; sand at 2,470-81 ft.; showing oil; drilling stopped to set csg.; ordered to drill on.

CALDWELL COUNTY

W. E. Allaun and Calco Pet. Co.'s No. 1 Martin ..... T. D. 2,920 ft.; preparing to shoot.
Keen & Malcolm's No. 1 Mollie McNeal, George C. Kimball Sur., 2,500 ft. to W line, 860 ft. to N line, 1 mile S from old Luling Field ..... T. D. 890 ft.; shut down.
San Antonio Petroleum Corp.'s No. 1 Gustave Walkerhagen, Thomas Maxwell Sur., 150 ft. to NW and SW lines, 11 miles W from Lockhart ..... T. D. 1,425 ft.; shut down in Edwards.
G. R. McIntire's No. 1 J. G. Towns in the I. Weldon Sur., 4,900 ft. to NE line, 1,350 ft. to SE line of Sur. ..... T. D. 2,630 ft. in chalk; shut down.
Cranfill & Reynolds' No. 1 M. L. Stroun, 150 ft. from SE and SW line of farm of Pablo Martenz Sur. .... T. D. 1,720 ft.; drlg. in chalk.
Trinity Drillers' No. 1 McMullen, 2,125 ft. from NE line, 150 ft. from NW line of Sur., Gibson Betty Sur. .... Derrick.
W. H. Harper's No. 3 Thomas J. Roberts Sur. ..... Dropped from reports until work is resumed.

DEWITT COUNTY

Gibson & McIntyre's No. 1 William Van Roeder ..... T. D. 1,480 ft.; shut down.
F. P. Zoch's No. 1 Steinman, John Garelli Sur., 976 ft. from SW line, 1,797 ft. from NW line ..... T. D. 4,475 ft.; drlg. in shale and gumbo.
H. T. Roe's No. 1 Leinhardt ..... T. D. 1,750 ft.; shut down.

DIMMITT COUNTY

Texas Fuel Gas Co.'s No. 1 City Natl Bank (Laxon) .... T. D. 680 ft.

DUVAL COUNTY

T. W. Callahan and W. M. Howard's No. 1 J. M. Luby, 3,960 ft. N line, 3,960 ft. W line Sur. 24 ..... Location.
National Oil Co.'s No. 2 Ball, Agua Poquita Sur., Blk. 3.. T. D. 3,010 ft.; drlg. in hard sand; taking core.
Humble Oil & Ref. Co.'s No. 1 Lackey & Weldon, 2,000 ft. from SE and SW lines of the Lackey & Weldon 1,000-ac. tract out of most SW cor. thereof in the Javiano Gomez Sur. ..... Location.
F. P. Zoch's No. 1 King, Blk. 25, Hoffer and Smith Subd., W. R. King ranch, Diego Hinijosa grant, 660 ft. N line, 660 ft. E line ..... T. D. 2,835 ft.; drlg.
Southern Oil Co.'s No. 1 Welder Wood, Sur. 215 ..... T. D. 750 ft.; standing waiting on water.

EDWARDS COUNTY

A. M. Griffith's No. 1 Wardlaw ..... Shut down 3,000 ft. awaiting orders; expect to drill deeper.
Phillips Pet. Corp.'s No. 2 A. G. Holman, 330 ft. from N and E lines of SE of tract, C.C.S.D.&N.G.R.G. Sur. No. 25 ..... Location.

FRIO COUNTY

Frank B. LeFeure's No. 1 H. W. and R. L. Eschenburg, Edward Gallagher Sur. No. 789, 3,980 ft. W of SE cor. of Edward Gallagher Sur. No. 788 and 1,320 ft. S of N line of Edward Gallagher Sur. No. 789 ..... Rigging up.

GOLIAD COUNTY

Wm. F. Morgan's No. 1 George Ray in Pedro Trevano Sur., 150 ft. from SE and NW line of George Ray 627-ac. tract ..... T. D. 510 ft.; preparing to run surface csg.

GONZALES COUNTY

Acme Oil & Royalty Corp.'s No. 1 Weber, Thomas Wright Sur. ..... T. D. 2,140 ft.; drlg. in Mt. Selman; cored top at 1,975 ft.
Fitzsimmons & Perrinot's No. 1 Z. Huber, 2,100 varas from NW line, 1,450 varas from NE line (river) of survey, 2¾ miles SE of Darst Creek in Stephen Smith Sur. ..... T. D. 1,715 ft.; drlg. in sandy shale.
Alice R. Garrett's No. 1 W. H. Cardwell, 150 ft. from SW line, 1,650 ft. from SE line of Sur., 12 miles S from Gonzales in the Byrd Lockhart Sur. ..... Spudded and shut down.
Adams & Lyles' No. 1 Jackson Sur. ..... T. D. 1,610 ft.; drlg. in shale.
Finnell & Elam's No. 1 Robinson, Liverpool Sur. ..... T. D. 1,720 ft.; shut down.

GUADALUPE COUNTY

Adams & Lyles' No. 1 Hoffman, 250 ft. S of N line, 350 ft. E of NE cor. of John Sowell Sur. in Green DeWitt Sur., 5 miles NW from Darst Creek ..... T. D. 2,000 ft.; drlg. in Taylor marl.
L. M. Conner et al's No. 1 Tom Havbirth (212-ac.), 1,000 ft. from NE line, 4,500 ft. from NW line of the Robert Hall Sur. ..... Location.
Turman et al's No. 1 St. Charles, 150 ft. N line, 300 ft. from W line of Sur., 5 miles SW of Grayburg's No. 1 Wells, SE cor. of county in the J. A. Miller Sur. ..... T. D. 50 ft.; set casing.
Trinity Drillers' No. 1 J. M. White, 975 ft. from NE line, 750 ft. from SE line of 166-ac. farm in the Mich Miller Sur. ..... Rigging up.

HAYS COUNTY

E. A. Bucklin's No. 1 A. Elsner ..... T. D. 1,800 ft.; drlg. in lime.
John H. Foster, trustee's No. 2 W. G. Barber, 7 miles SE of Buda ..... T. D. 671 ft.; shut down.

JIM WELLS COUNTY

E. W. Ogden's No. 1 G. Farris, M. Perez Sur. ..... T. D. 2,615 ft.; shut down.

KARNES COUNTY

Ruby & Claypool's No. 1 Tom V. Zepeda Sur., 850 ft. N line, 1,600 ft. E line ..... Install new rotary at 1,238 ft.
Hurador Oil Co.'s No. 1 W. E. Porter ..... T. D. 3,400 ft.; installing new rotary.

KENDALL COUNTY

Borgett et al's No. 1 Haag, W. Avery Sur. ..... T. D. 600 ft.; corrected depth; pulled csg.; reaming.
Dixon Oil Co.'s No. 1 Ottmer Behr, W of H.T.&B.R.R. Sur., 3½ miles SE from Sisterdale ..... Rigging up.
Sterling's No. 1 Willie Werner, 2 miles NW from Borgett No. 1 Haag ..... T. D. 924 ft.; shut down; hole making one-half bbl. oil when bailed.

KLEBERG COUNTY

Bowen-Sarles' No. 1 Robert H. Simmons, Sec. 7, King Subd., 3 miles W from Ricardo ..... T. D. 415 ft.; standing.

KINNEY COUNTY

Lloyd Oil Co.'s No. 1 G. B. Moore, Sur. 117 ..... T. D. 3,000 ft.; producing sulphur water.
A. Blume et al's No. 2 Herbst, 1,731 ft. W and S lines of Sur. in the Poindexter-Burns Sur. ..... Rigging up cable tools.
Mardon Oil Co.'s No. 2 Jim Clamp, in the John Winters Sur. No. 346, near No. 1 ..... Moving in cable tools.

LEE COUNTY

Byrd et al's No. 1 H. L. Bastle, 1,200 ft. N and 1,000 ft. E of 80-ac. tract of Wm. Johnson ..... Drlg. 3,000 ft.

Texas-Louisiana Carbon Corp.'s No. 1 Bryan, in the S. F. Austin Sur., 1,200 ft. N and W of 1,200-ac. farm ..... Shut down 3,120 ft.
Todor Oil Corp.'s No. 1 H. Zsesch, in the J. Meeks Sur., 150 ft. N and 900 ft. W of S. Meeks Sur. .... Shut down 2,050 ft.

LIVE OAK COUNTY

O'Neil & Catlett's No. 1 Smith, 900 ft. SW line, 150 ft. NW line ..... T. D. 3,566 ft.; sand at 3,560-66 ft.; tested dry.
Dr. J. K. Rowan Co.'s No. 1 Lynne Ranch, 171 ft. W of George West ..... Location.
Simmons Oil Co.'s No. 1 Richard Coquat, in James C. Hill Sur., 2,250 ft. to S line, 1,750 ft. to E line, 7 miles NE of Oakville ..... T. D. 3,090 ft.; drlg. in gumbo.

MAVERICK COUNTY

Rycade Oil Corp.'s No. 6 Chittim, 1,455 ft. from S, 320 ft. from W of Sec. 116, Blk. 7, L&G.N. Sur. ..... Rigging up.
Rycade Oil Corp.'s No. 5 Chittim ..... T. D. 3,442 ft.; standing; hole full sulphur water.
Rycade Oil Corp.'s No. 5 Sullivan, in C of Sec. 82, Blk. 7, in the L&G.N. Sur. ..... Moving in.
Rycade Oil Corp.'s No. 3 Chittim, Blk. 7, Sur. 116, H.& G.N., 175 ft. N of No. 1, 10 ft. W, 225 ft. S line .... T. D. 6,645 ft.; shut down for orders; producing 30 bbls. light oil, 10,000,000 ft. gas.

MEDINA COUNTY

Pat Armstrong's No. 1 C. W. Butts in George C. Hanson Sur. ..... T. D. 1,102 ft.; shut down.
Pan American Pet. Co.'s No. 1 Harrison, Sur. 799, 15 miles S from Hondo ..... Spudded in and shut down.
Donaldson Oil & Dev. Co.'s No. 2 Adams Co., James Hillemmeyer No. 25 Sur., 500 ft. to E line of Sur., 150 ft. to S line of N half of Sur. ..... Rig up.
F. E. Tegler's No. 6 J. P. Nixon, NW cor. J. J. Durst Sur. No. 14 ..... Location.
Pat Armstrong's No. 1 Crawford, 1,389 ft. N line, 2,650 ft. E line of Sur., 478.6 miles W from Devine ..... Rigging up.
Pearson Oil Co.'s No. 4 Mangold, 1,600 ft. W of E line, 1,800 ft. N of S line of Sur. in the I. S. Palmer Sur. No. 20, south from Noonan ..... T. D. 765 ft.; set csg. at 500 ft.; to drill plug.
Mid-Kansas-Gulf's No. 1 Jessie Newton, 150 ft. E of W line, 750 ft. N of S line of 624-ac. tract, E one-third of Maximo Bernald Sur. 762, 15 miles SW from Hondo ..... T. D. 750 ft.; oil show 365 ft.; gas show 698 ft.
Pure Oil Co.'s No. 1 Nick F. Fahn in Amos Hudson Sur. No. 587, near NW line of Sur. ..... Core drilling.
Cecil Switzer's No. 1 Zerr, 6 miles west of Hondo ..... T. D. 3,710 ft.; fishing for tools.
R. C. Hill's No. 1 A. Wurzbach, G. Areola Sur., 500 ft. E line, 600 ft. S line ..... Location.

MILAM COUNTY

Service Oil & Gas Co.'s No. 1 Muldrow, L. Taylor Sur., SE cor. ..... Location.
Hill & Bonwell's No. 1 B. Booker, James Welch Sur. .. Fishing 2,020 ft.
Lloyd Oil Corp.'s No. 1 San Clement, Fokes Sur. ..... Spudded in.
A. H. Wray's No. 1 D. D. Fowler ..... T. D. 1,688 ft.; sidetracked 360 ft. of drill pipe lost in hole; now drlg.

McMULLEN COUNTY

Cowboys Oil Co.'s No. 1 Shiner, H. M. Brewer Sur. .... T. D. 2,610 ft.; drlg. in gumbo.
Southern Crude Oil Purch. Co.'s No. 1 J. B. Baker, 2,310 ft. from S and E lines of Sec. 7 in the F. M. Lowe Sur. ..... T. D. 1,916 ft.; drlg. in shale.

NUECES COUNTY

H. Grimm et al's No. 1 A. R. Roberts, Blk. 79, Winter Vegt. Garden Subd., 6 miles NW of Robstown, 12 miles NE Agua Dulce Field ..... T. D. 2,426 ft.; standing.

SAN PATRICIO COUNTY

LaFeria Oil & Gas Co.'s No. 1 C. C. Smith in J. C. White Sur., 690 ft. to N line, 350 ft. to E line ..... T. D. 2,252 ft.; set 6⅝-in. csg. 2,246 ft.; waiting on cement.

STARR COUNTY

Adams Scanlon, Scanlon & Wright's No. 1 Margo, Por. 71, Jurisdiction of Mier, 1,921 ft. W line, 430 ft. N line ..... Temp. abandoned.
Smith & Adams' No. 1 Welch, Perdernal Sur. ..... Standing at 757 ft.; sand showing gas.

UVALDE COUNTY

Waldrop & Welch's No. 1 H. S. Benson, 2 miles NW of Uvalde ..... T. D. 770 ft.; set csg.; waiting on cement.
Phantom Oil Co.'s No. 1 Claudt, Sur. 661 ..... Derrick.

WILLACY COUNTY

Weimer-Richardson's No. 1 Elmore ..... T. D. 1,860 ft.; shut down in gumbo.

WILLIAMSON COUNTY

Harlem et al's No. 1 H. H. Stiles, in the J. Bevil Sur., 220 ft. N and 330 ft. E of Sur. ..... Rigging up.
Fred Beaty's No. 1 H. Bland, 450 ft. from N line, 1,000 ft. from E line of tract in the P. Coursey Sur., 1 mile east from Taylor ..... T. D. 1,140 ft.; shut down.
G. B. Peterman's No. 1 J. C. Abbott, 310 ft. from E line, 30 ft. from S line of tract in the S. Miller Sur. ..... Location.
G. B. Peterman's No. 2 J. C. Abbott, 450 ft. from S and W line of Abbott 100-ac. tract in the Simon Miller Sur., SE from Thrall ..... Rigging up.
Powell & Kykendall's No. 1 Christian Mager in the W Byerly Sur., 150 ft. N and 450 ft. E of farms of 150 acres ..... Shut down 1,501 ft.
Scomyers Edwards et al's No. 1 J. C. Abbott, 88 ft. from N line, 300 ft. from E line of Abbott 100-ac. tract in the Simon Miller Sur., SE from Thrall .... Rigging up.
Simms Oil Co.'s No. 1 L. E. Lawrence, 150 ft. from N line, 150 ft. from W line of Lawrence 100-ac. tract in the Simon Miller Sur., SE from Thrall ..... Location.
L. W. Wilson et al's No. 1 W. L. Lawrence, 150 ft. from W line and C N and S of 35-ac. tract or 1,400 ft. from SW line, 1,450 ft. SW line of H. Owens Sur. .. Rigging up.

WILSON COUNTY

Empire Gas & Fuel Co.'s No. 1 Shook, 1,350 ft. NW line, 7,100 ft. SW line Vincente Zepeda Sur. ..... Location.
Rycade Oil Corp. et al's No. 1 George Hice, Juan Delgado Sur., 650 ft. W of Cibolo River, 150 ft. SE line of tract ..... T. D. 3,390 ft.; drlg. Edwards.

ZAPATA COUNTY

John Pappas' No. 2 Cuellar, Por. 33 and 34 ..... T. D. 1,867 ft.; broken sand 1,863-67 ft.; shows gas.
National Oil Co.'s No. 1 D. B. Adams ..... T. D. 690 ft.; shut down; lack of water; making considerable gas.

ZAVALA COUNTY

Weigand Bros.' No. 1 W. L. Gates, Hooper & Wade Sur. No. 13, 1,320 ft. S of N line, 1,320 ft. W of NE cor. Sur., about 16 miles S of Batesville ..... T. D. 1,125 ft.; drlg. in shale.
Jack Baldwin's No. 1 J. R. Price, in the W. E. Erskin Sur. No. 34 ..... Spudded in and shut down.
Southern Crude Oil Purch. Co.'s No. 1 Nat M. Washer in the T. Pinckhardt Sur. No. 180, 1 deg. E, 6,795 ft. from SE cor. ..... T. D. 1,640 ft.; drlg. in hard shale.
Ike Pryor's No. 1 Martha Campbell, 400 ft. from N line, 5,400 ft. from E cor. of Sur., Sec. 99, in the Martha Campbell Sur., 3¼ miles NE from La Pryor.. T. D. 535 ft.; drlg.
Texas Fuel & Gas Co.'s No. 4 West Sur. 44 ..... T. D. 1,139 ft. (corrected); showing for 1,500,000 ft. gas.
Texas Fuel & Gas Co.'s No. 1 Matthews in upper Byrd Ranch ..... T. D. 1,205 ft.; drlg. in shale.

SOUTHWEST TEXAS

(Continued from Page 59)

ment in Live Oak County. This is southwest of Pettus.

McMullen County

Cowboy Oil Co. drilling on the Shiner ranch in McMullen County has been taken over by Hilton & Phillips and others of Oklahoma City. Charles Wiggins has the contract to carry this well on down. The hole was washed to bottom at 2,280 feet and is now drilling in gumbo below 2,600 feet.

Southern Crude Oil Purchasing Co. on the T. B. Baker ranch in southeast McMullen County is drilling in shale at approximately 2,000 feet.

Brooks County

Houston Oil Co.'s No. 1 Wormser-Holbein, discovery oil well 660 feet southwest of the same company's No. 1 Lasater, discovery gas well in the Lasater Field, 18 miles northwest of Falfurrius, has rigged up over this hole again. The flow of oil and salt water has been killed and the well commenced drilling deeper from 4,170 feet where the well was first completed for a 200-bbl. flowing well until salt water broke in and reduced the output of oil as the salt water increased.

Humble Oil & Refining Co. and Shell Petroleum Corp.'s joint test on the William Singer lands, 7 miles southeast of the Lasater Field, located 2,500 feet south of north line and 330 feet west of east line of Section 312 Alta Verde area, has passed up two sands which in the opinion of the driller would have made a commercial well. The first sand which carried considerable saturation but was somewhat broken with shale streaks was topped at 2,360 feet. At 2,470-81 feet this well showed 11 feet of true sand quite heavily saturated and the driller shut down to set casing but received instructions from the Houston offices of the interested companies to drill deeper. This well was originally scheduled to be drilled to 7,000 feet if production was not obtained at a shallower depth. Without necessity of producing the oil found it seems to be the intention of the larger operating companies to experiment and make exploration wells of these wildcat tests.

Lasater Field in Brooks County will soon see the spudding in of two tests which will aid greatly in defining the limits of that field. Each test is 1½ to 2 miles in opposite directions from the discovery well. Matt Webber and Frank Allen, operator and drilling contractor of Laredo, have closed a deal with Ed Lasater for a 264-acre tract to the northeast of the discovery well. This tract has the Blanco Creek for its south and west boundary lines and is just south of the Duval County line and notches into the northeast corner of the original Shell Petroleum Corp.'s block. Drilling operations are due to be commenced on this tract within the next 60 days.

A well is due to be spudded in by the Houston Oil Co. on its recent purchase of 3,600 acres in the southern portion of the Wormser-Holbein ranch and to the south and west of the discovery well.

Agua Dulce Field

Allied Gas Co.'s No. 1 Chapman, 660 feet from the most northern and western east lines of Chapman tract on Pintas Creek and south of the Kerr lands tested a small amount of gas and some brackish water at 2,036 feet in what is known as the upper producing sand of this gas field. The well is being carried on down to discovery well sand. This is farthest south well in field.

COMPLETIONS

Darst Creek—Guadalupe County

Gulf Production Co.'s No. 2 Thomas Dix, 473 feet southwest line, 150 feet southeast line of tract, in the J. R. Robinson Survey; total depth 2,577 feet; 7,800 bbls. initial. Same company's No. 2 Dix-McKean, 850 feet from No. 1, offset United North & South Development Co.'s No. 1 Dix-McKean, in the J. R. Robinson Survey; total depth 2,578 feet; 1,200 bbls. Same company's No. 4 Dix-McKean, 450 feet northeast line, 150 feet southeast line of tract, in the J. R. Robinson Survey; total depth 2,600 feet; swabbed 528 bbls.

Humble Oil & Refining Co.'s No. 8-A Denman, 650 feet north of center of south line of survey, in the A. S. Emmett Survey; total depth 2,593 feet; flowed 800 bbls.

Magnolia Petroleum Co.'s No. 3 M. E. Roamel, 300 feet south of No. 2 well, 300 feet from northwest line, 400 feet northwest of No. 1 Appling producer, in the James Hodges Survey; total depth 2,530 feet; flowed 1,500 bbls.

The Texas Company's No. 3-B Knoblock, 779 feet from west line, 150 feet south line of 75-acre lease, in the J. R. Robinson Survey; total depth 2,560 feet; flowing 3,900 bbls. Same company's No. 4 L. Anderson, 150 feet to south and east lines of tract, in the Jacob C. Darst Survey; total depth 2,653 feet; flowed 35 bbls. per hour.

United North & South Development Co.'s No. 1-B Dix-McKean, 150 feet east of west line, 150 feet north of south line of 21-acre tract; total depth 2,600 feet; flowing 2,400 bbls. Same company's No. 2-A Dix-McKean, 150 feet north of south line, 150 feet west of east line of 8-acre tract; total depth 2,552 feet; flowing 1,200 bbls.

Carolina-Texas Pool—Webb County

Foster Barnsley's No. 7 Webster, Survey 684, 750 feet east line, 510 feet south line of NE SW of survey; total depth 2,622 feet; estimated 75 bbls.

Kohler Pool—Duval County

Simms Oil Co.'s No. 8 Dinn, 660 feet south line, 660 feet east line of SW SE, Survey 143; total depth 1,756 feet; 30,000,000 feet of gas, 450 pounds rock pressure.

ABANDONED TESTS

Darst Creek—Guadalupe County

Cranfill-Reynolds' No. 1 R. C. Appling, 3,600 feet from southwest line, 2,700 feet from northwest line of survey on 111-acre tract, in the James Hodges Survey; total depth 2,613 feet; sulphur water; plugged back from 2,813 feet and abandoned.

The Texas Company's No. 1 S. M. Roamel, 150 feet northeast line, 150 feet northwest line of 100-acre lease; total depth 2,754 feet; dry and abandoned.

NEW LOCATIONS

Darst Creek—Guadalupe County

Gulf Production Co.'s No. 5 Dix-McKean, total depth 450 feet, drilling in shale. Same company's No. 6 Dix-McKean, total depth 759 feet, drilling in shale. Same company's No. 7 Dix-McKean, total depth 44 feet, spudded in. Same company's No. 8 Dix-McKean, total depth 400 feet, drilling in shale.

Humble Oil & Refining Co.'s No. 10-A Denman, 1,100 feet from south line, 1,250 feet from west line of tract, in the A. S. Emmett Survey; derrick. Same company's No. 2 A. E. Dowdy, 150 feet from south line, 1,050 feet from east line of tract, in the J. C. Darst Survey; total depth 2,270 feet; drilling in Taylor marl. Same company's No. 5 Sally Wilson, 800 feet south of north line, 1,000 feet west of east line, in the Jacob Darst Survey; total depth 2,255 feet; drilling in chalk.

Jake Jarmen and others' No. 1 Fee, 490 feet from north end of 20-foot strip off end of D. D. Baker 60-acre tract, in the Jacob Darst Survey; total depth 1,900 feet; drilling in shale.

Magnolia Petroleum Co.'s No. 7 Thomas Dix, 450 feet from southwest and northwest lines of 50-acre tract, in the J. R. Robinson Survey; rigging up.

The Texas Company's No. 4 H. Willie, 390 feet north line, 330 feet east line of tract, in the J. Darst Survey; total depth 1,896 feet; drilling in shale.

Carolina-Texas Pool—Webb County

George S. Marshall's No. 2 Webster, 810 feet south line, 1,170 feet west line, Survey 684; spudded in.

Jennings Pool—Zapata County

Claggett & Blair's No. 3 Trevino, 500 feet east line, 150 feet north line, Block 1, Survey 66; location.

A. L. Edgington's No. 1 Trevino, 150 feet south line, 150 feet east line, Block 26, Survey 412; rigging up.

Killam-Duggan's No. 12 Cuellar, 150 feet southwest line, 420 feet north line,

Survey 278; total depth 1,390 feet; fishing.

DRILLING ACTIVITY

Dobrowolski Pool—Bexar County

Pen-Tex Oil Co.'s No. 1 Dobrowolski, 150 feet from south line, 150 feet from east line of west 67 acres of Dobrowolski 147-acre tract, in the M. Menchaca Survey; total depth 300 feet; drilling in shale.

Buchanan Pool—Caldwell County

Buchanan-Danciger's No. 1 W. T. Cude, 150 feet each way out of southeast corner of 23-acre W. T. Cude lease; spudded in and shut down.

Pettus Field—Bee County

Union Producing Co.'s No. 5 George Ray, 1,750 feet southeast line, 250 feet northeast line of survey, in the Thomas Anson Survey, northeast offset to No. 1 McKinney, 3 miles northeast of Pettus; total depth 2,807 feet; drilling in tough gumbo. Same company's No. 6 Ray, 1,300 feet east line, 755 feet south line of survey, in the P. Miller Survey; total depth 4,425 feet; coring and testing; saturated sand fails to give commercial production.

Lasater Pool—Brooks County

Houston Oil Co.'s No. 1 Holbein-Wormser, in the Palo Blanco de Maguellas Survey, 330 feet north line, 6,540 feet east line, direct offset 660 feet south of No. 1 Lasater; total depth 4,200 feet; rigged up over old discovery well; drilling deeper.

Cartwright Pool—Live Oak County

Houston Oil Co.'s No. 2 J. B. Dunning, in the M. B. Kilvin Survey, 1,445 feet north of No. 1; total depth 4,675 feet; drilling in shale.

Agua Dulce Field—Nueces County

Allied Gas Co.'s No. 1 Warren Chapman, 660 feet from the most northern and the western east line of tract, south of Kerr lease; total depth 2,038 feet; sand 2,036-38 feet; showed small amount of gas and brackish water on drill stem test in upper producing sand; deepening to discovery well sand.

Cole Pool—Duval County

Magnolia Petroleum Co.'s No. 6 Servando Benavides, 330 feet northwest line, 380 feet northeast line, Block 7, Survey 174, O'Hern-Seacord subdivision; total depth 740 feet; drilling.

Kohler Pool—Duval County

Allied Gas Co.'s (Pure) No. 2 Peters, 560 feet west line, 1,980 feet north line, Survey 161; total depth 1,400 feet; drilling.

Everett Suladie's No. 1 Peters, 165 feet south line, 230 feet west line, Survey 33; total depth 300 feet; drilling.

Allied Gas Co.'s (Pure) No. 1 J. T. Dinn, 1,500 feet south line, 1,500 feet east line, Survey 668; total depth 200 feet; drilling; set 10-inch casing at 38 feet; number changed back to No. 1 from No. 4.

Humble Oil & Refining Co.'s No. 41 Kohler, 2,970 feet south line, 330 feet east line, Survey 165; location. Same company's No. 42 Kohler, 495 feet south line, 165 feet west line, Survey 171; total depth 293 feet; set 10-inch casing at 293 feet.

Schoolfield-O'Byrne—Duval County

C. E. Long (Shell) No. 5 Hahl, 150 feet north line, 630 feet east line, Block 26, Survey 250; location.

Randado Pool—Jim Hogg County

Magnolia Petroleum Co.'s No. 1 Weil, Block 2, Survey 5, 660 feet north line, 349 feet east line; total depth 3,260 feet; drilling.

Roma Pool—Starr County

The Texas Company's No. 1-B V. C. de Guerra, 150 feet south line, 150 feet west line of north 1,173 acres, Share 92, Porcion 68, of Partition Porcion 67-68-69-70-71-72, Jurisdiction of Mier; rigging up.

Carolina-Texas Pool—Webb County

W. R. Shankle's No. 2 Webster, Survey 684, 1,170 feet west line, 150 feet south line; rigging up.

Magnolia-Cole Pool—Webb County

Magnolia Petroleum Co.'s No. 4 Brennan-Benavides, Mariano Arispe grant, corner Blocks 16-17-52-53, Myrtle E. Hale subdivision; total depth 3,083 feet; sand at 3,070-83 feet tested gas and oil; washing out to set screen.

Cole Pool—Webb County

O. W. Killam's No. 18 Bruni, derrick. E. H. Buckner's No. 1-A Rosa Benavides, 660 feet northwest line, 660 feet northeast line, Cole Petroleum Co. subdivision, Mariano Arispe grant, Block 5, Survey 14; total depth 650 feet; drilling; set 10-inch casing at 60 feet.

W. E. May's No. 1 Volpe, 660 feet east line, 840 feet south line, Block 15, Survey 694; total depth 1,470 feet; drilling.

Allied Gas Co.'s (Pure) No. 1 Bruni, 200 feet southwest line, 450 feet northwest line, Mariano Arispe grant, Survey 7, Adams (Foltz) subdivision; total depth 2,269 feet; sand 3,260-63 feet tested 20,000,000 feet of gas, 396 pounds rock pressure; sand 2,263-69 feet, 30,000,000 feet of gas, 700 pounds rock pressure; set 6⅝-inch casing at 2,259 feet.

Magnolia Petroleum Co.'s No. 1 S. Perez, Survey 460, J. Poitevent, 1,980 feet north line, 660 feet west line; total depth 5,120 feet; drilling.

Magnolia Petroleum Co.'s No. 2 King-Harper, Block 2, Survey 323, 660 feet north and east lines; location.

Jennings Pool—Zapata County

Claggett & Blair's No. 2 Trevino, Block 1, Survey 66, 150 feet west line, 200 feet north line; total depth 1,254 feet; location surveyed and corrected; was carried as Blair & Acklin's No. 2 Trevino.

O. W. Killam's No. 20 Cuellar, location. O. W. Killam's No. 2 F. G. Martinez, 543 feet west line, 150 feet south line of SE, Survey 2; total depth 1,953 feet; sand 1,946-53 feet tested oil and salt water. O. W. Killam's No. 17 Cuellar, 600 feet north line, 940 feet east line of 160-acre Cuellar tract out of 1,772-acre Cerrito Blanco grant; derrick.

R. F. Blankenship's No. 2 Garza, Block 2, Survey 413, 425 feet west line, 425 feet north line; total depth 100 feet; rigging up. R. F. Blankenship's No. 2 Montemayor, 820 feet east line, 150 feet north line, Block 7, Survey 64; total depth 250 feet; drilling.

Nursery Field—Victoria County

Humble Oil & Refining Co.'s No. 3-A Jay J. Welder, in the D.L.&C. Survey, 1,634 feet southeast line, 736 feet southwest line, 1½ miles northeast from Nursery; total depth 5,896 feet; making no water; continuing to gas and spray oil in small quantities; Humble now blowing well about every 2½ hours; builds up 1,500 pounds rock pressure with spray of oil; gas pressure exhausted in about 2 hours open flow.

Darst Creek—Guadalupe County

J. S. Abercrombie and Harris Oil Co.'s No. 4 Thomas Dix, 300 feet north of No. 1, in the J. R. Robinson Survey; location. J. S. Abercrombie's No. 5 Thomas Dix, 300 feet north of No. 3, in the J. R. Robinson Survey; location. J. S. Abercrombie and Harris Oil Co.'s No. 6 Thomas Dix, 300 feet north of No. 2, in the J. R. Robinson Survey; location.

Gulf Production Co.'s No. 3 Dix-McKean, 150 feet south of center of north line of tract, in the J. R. Robinson Survey; total depth 2,524 feet; set casing. Same company's No. 1 Knoblock, in the J. R. Robinson Survey; total depth 2,510 feet; drilling in.

Humble Oil & Refining Co.'s No. 1 Baker, in the J. C. Darst Survey, 150 feet north line, 183 feet west line of tract; location. Same company's No. 2 Baker, 472 feet north line, 183 feet east line of tract; location. Same company's No. 9-A Denman, 915 feet east of No. 7, 800 feet from south line of A. S. Emmett Survey, in the A. S. Emmett Survey; total depth 2,570 feet; set casing. Same company's No. 1 Sally Wilson, in the J. C. Darst Survey, 150 feet from north line, 183 feet from west line; location. Same company's No. 4 Sally Wilson, 500 feet east of No. 2, 150 feet north line of tract, in the Jacob Darst Survey; derrick. Same company's No. 1 Yates-Wilson, in the Jacob C. Darst Survey, 150 feet from north and west lines of tract; location (corrected).

Magnolia Petroleum Co.'s No. 6 Thomas Dix, 473 feet southwest line, 150 feet northwest line of tract, offset to Gulf's No. 2 Thomas Dix, in the J. R. Robinson Survey; total depth 2,140 feet; drilling in Taylor marl. Same company's No. 1 L. V. Echols, in the James Hodges Survey, 150 feet to northwest and southwest lines of farm, 3,650 feet to southwest line, 3,220 feet to northwest of survey; total depth 2,715 feet; shut down; water. Same company's No. 2 L. V. Echols, in the James Hodges Survey, 150 feet to southwest and southeast lines of lease, 300 feet southeast of No. 1 well, 164½-acre tract; total depth 2,845 feet; shut down; dry. Same company's No. 1 H. G. Goldman, 1,274 feet from northeast line, 150 feet from northwest line of farm, in the J. B. Alexander Survey; total depth 2,820 feet; drilling in Edwards; developed sulphur water at 2,703 feet. Same company's No. 1 Annie Knodel, 150 feet each way out of northwest corner, in the J. R. Robinson Survey; total depth 2,430 feet; drilling in Buda. Same company's No. 2 Rand Miller, 450 feet from northeast line, 150 feet from northwest line of tract, in the J. B. Alexander Survey; total depth 2,592 feet; cemented casing. Same company's No. 1 S. M. Roamel, 150 feet each way from southeast corner of 40-acre tract, in the James Hodges Survey; total depth 3,385 feet; drilling in Edwards. Same company's No. 2 S. M. Roamel, 150 feet each way from northeast corner of 40-acre tract, in the James Hodges Survey; location.

Simms Oil Co.'s No. 3 C. W. Manford, 300 feet southwest No. 1, 225 feet from southeast line; location.

Stroubie & Stroubie's No. 2 Rand Miller, 150 feet south from No. 1, in the J. B. Alexander Survey; location. Stroubie & Stroubie's No. 3 Rand Miller, in the J. B. Alexander Survey, 150 feet south of No. 2; location. Stroubie & Stroubie's No. 4 Rand Miller, 150 feet south of No. 3, in the J. B. Alexander Survey; location.

Sun Oil Co.'s No. 3 Knoblock, 150 feet southeast line, 460 feet northeast line of 75-acre tract; total depth 2,165 feet; drilling in Taylor marl. Same company's No. 4 Knoblock, 150 feet northwest line, 460 feet northeast line of 75-acre lease; total depth 2,160 feet; drilling in chalk. Same company's No. 5 Knoblock, 763 feet from southwest line, 150 feet from southeast line, in the J. W. Robinson Survey; total depth 2,250 feet; drilling in chalk.

The Texas Company's No. 2-B Knoblock, 450 feet from northeast line, 150 feet from northwest line of B lease, in the J. R. Robinson Survey; total depth 2,529 feet; set casing. Same company's No. 1-B Knoblock, 450 feet from southeast line, 450 feet southwest line of B lease, in the J. R. Robinson Survey; rigging up. Same company's No. 1-A Knoblock, 450 feet from northeast line, 150 feet from southeast line of A lease, in the J. R. Robinson Survey; total depth 1,600 feet; drilling in sandy shale. Same company's No. 5 Dallas-Wilson, 150 feet from north and east lines of the Dallas-Wilson tract, in the Jacob C. Darst Survey; total depth 2,463 feet; drilling in Buda. Same company's No. 3 Dallas-Wilson, in the J. C. Darst Survey, 150 feet north of center of south line; location. Same company's No. 2 Dallas-Wilson, 150 feet south and west lines of tract; spudded in and shut down. Same company's No. 2 L. Anderson, in the Jacob Darst Survey, 150 feet to north and east lines; total depth 685 feet; shut down. Same company's No. 2 Posey, 450 feet northeast line, 150 feet northwest line of lease, in the J. R. Robinson Survey; total depth 1,200 feet; shale-boulders. Same company's No. 3 P. Roamel, total depth 1,250 feet, drilling.

United North & South Development Co.'s No. 3 P. Roamel, in the J. R. Robinson Survey; rigging up rotary.

CANADIAN FIELDS

(Continued from Page 60)

Valley and the deepest now drilling, but Imperial Oil, Ltd., handling the operations, has the hole in excellent shape and is planning to continue indefinitely for a thorough test of the Madison formation, and possibly of the underlying Devonian.

Central Turner Valley

In Central Turner Valley, most of the tests in the deep lime belong to the Royalite-Imperial group. Royalite's No. 21, LSD 1, Section 13-20-3w5, is reported in small production at 5,010 feet.

No. 23, in NW, Section 31-19-2w5, was completely demolished by the premature explosion of 1,000 quarts intended for use in shooting the well in the deep lime. The explosion was followed in a few hours by a gale of cyclone proportions which swept the field, flattening about a dozen derricks.

Among the independent tests in the central field, McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, started to clean out with diamond drill but apparently blew back into production. This well had at one time a peak production of around 180 bbls. and has been intermittently on and off production, a string of tools on bottom at 3,945 feet helping to shut off the flow.

Interest in the North Turner Valley centers in Model Oils' No. 1, LSD 8, Section 22-20-3w5, which is cementing 6¼-inch casing in the top of the lime at 5,810 feet. Cable tools with control head will be used to complete the test, which is expected to get production around 6,000 feet. It has been drilling steadily since August 16, 1928, six strings of casing, costing approximately $53,000, being used. The location is a half-mile southwest of Foothills Oil & Gas Co.'s No. 1, the first deep lime producer in the North Turner Valley, which has a sustained output of around 100 bbls a day. Model's No. 1 is the only test in the northern area now drilling in the deep lime.

In Section 9-19-2w5, Southern Lowery's No. 2 is digging cellar in LSD 13, 200 yards east of Foothills' No. 3 deep test, and will rig up with cable tools.

South Turner Valley

In the South Turner Valley, Freehold Oil Corp.'s No. 3, LSD 8, Section 20-19-2w5, is reported spudding in this week. Union Drilling Co. has the contract and cable tools will be used. Calmont's No. 11, LSD 11, will spud in with the cable tools from No. 8. Calmont's No. 12 is reported working on derrick.

In Section 4-19-2w5, Mercury Oils' No. 2, LSD 12, has finished new derrick and is rigging up rotary outfit to resume drilling in the Dalhousie sands at 4,460 feet.

East Crest Oil Co.'s No. 2-A, LSD 4, Section 16-19-2w5, is drilling after shutting off surface water with 20-inch pipe. The following officers were elected at the annual meeting: President, Louis Blake Duff, Welland; vice president and managing director, Harvey S. Price, Calgary; vice president, Frank Bearss, Niagara Falls; secretary, J. W. Butters, Niagara Falls; treasurer, R. E. Reid, Welland; directors, F. H. Leslie, Dr. G. B. Snyder, J. E. Houck, Niagara Falls; G. Y. Houck, Chippewa; Dr. W. R. Colbeck, Welland; M. H. Staples, A. M. Robertson, Dr. W. E. Spankie, James Perrie, Calgary.

Commonwealth Petroleums' No. 2, LSD 7, Section 9-19-2w5, had derrick wrecked by high winds, with a loss estimated $4,000; test of production from the Dalhousie sand at 4,420 feet is being continued. Merland Oil Co.'s No. 1, LSD 13, Section 27-18-2w5, which is taking a small production from the Dalhousie sand at 4,470 feet, is preparing to erect new derrick and rig up with rotary outfit to drill to the lime horizon.

Regent Oil Co.'s No. 1 producer was considerably damaged by an explosion which blew a separator 50 feet into the air and tore out the side of the derrick. The well and equipment were being repaired when the explosion occurred.

Tests in the Foothills

On the Moose Dome, northwest of the Turner Valley Field, Moose Oils' No. 1, LSD 16, Section 29-22-6w5, got a show of crude oil at 2,206 feet following a shot to loosen the tools. The show was encountered in the Devonian limestone. Drilling is being continued at 2,235 feet. Hudson's Bay Oils' No. 1 Highwood, LSD 8, Section 1-18-3w5, is preparing to resume at 1,240 feet. Warner Oils' No. 3, LSD 3, Section 28-18-3w5, is drilling at 2,060 feet after encountering a show of crude oil at 1,982 feet and a little gas at 1,145 feet. Open hole is

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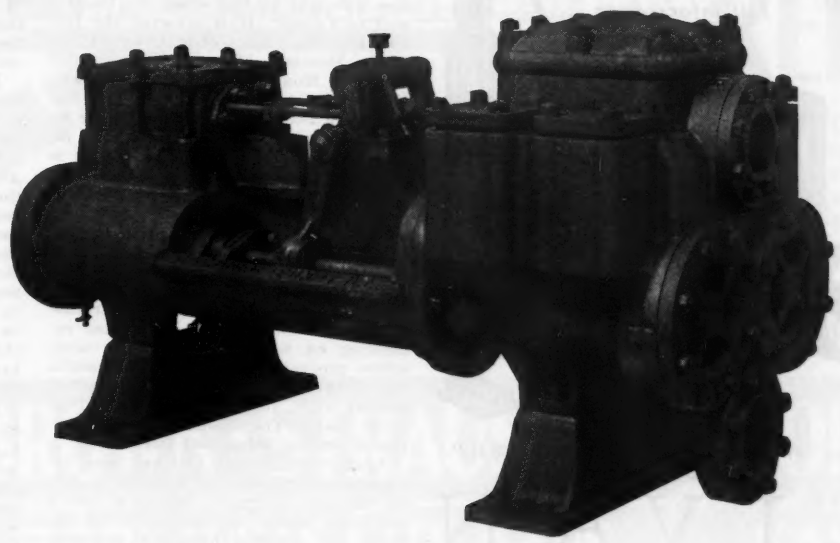

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being drilled from 1,775 feet, where 12½-inch casing was set.

In the Morley Reserve area, Wabash Oils' No. 1 is drilling below 3,010 feet. It entered the Madison limestone at 1,483 feet and the Devonian around 2,790 feet and has wet gas flows aggregating about 1,000,000 feet.

Red Coulee Field

In the Red Coulee Field, southern Alberta, Vanalta Oils' No. 2, LSD 3, Section 4-1-16w4, has been cemented on top of the Sunburst sand at 2,190 feet. It has been checking almost exactly with Vanalta's No. 1 discovery. The latter has pulled pipe and cleaned out paraffin which has interfered with production, and is again making around 90 bbls. a day. Work has been commenced on the 4-inch oil line from the field to the Maple Leaf refinery at Coutts to handle the Vanalta production. A 3-inch gas line will also be laid from the Vanalta well to Coutts. It is reported the Illinois Pipe Line Co. will build an oil line on the Montana side.

On the Montana end of the structure, Mid-Continent Oil & Refining Co.'s No. 1, Section 2-37-4w, is delivering crude by tank cars to the Imperial Oil, Ltd., refinery at East Calgary. The output is at present trucked to Coutts, but will ultimately be handled through the Illinois Pipe Line Co.'s line. Mid-Continent's No. 1 is reported making around 100 bbls. a day. Mid-Continent's No. 2 is reported practically ready to spud in just south of No. 1 producer. Hannah-Porter-Cosmos' No. 1 has had trouble with water shut-off but is reported cementing on top of the Vanalta sand, where production is expected. Monalta Oil Co.'s No. 2 Buckley is reported drilling after testing water shut-off at 2,180 feet. The Thomas well is reported drilling below 300 feet.

Adanac Oil & Gas Co. has been incorporated with office at Calgary to drill on Montana acreage. Adanac's No. 1 has been located in Section 8-37n-3w, where the company holds 320 acres on structure. R. S. Nyhagen, formerly drilling superintendent for the Burmah Oil Co., is president and managing director, while Lorne N. Laidlaw, R. C. Black and G. H. Minor of Medicine Hat and M. E. McDonnell of Calgary are directors.

On Canadian End

On the Canadian end of the structure, Ko-Top Oils' No. 1, Section 2-1-17w4, is reported resuming at 1,650 feet. Commonwealth Petroleums, Ltd., of Calgary, will drill on N half, Section 3-1-16w4, subleased from Alberta Pacific Consolidated Oils, Ltd., of Calgary. Alberta Pacific Consolidated will drill on acreage offsetting Vanalta's No. 1 producer. Contract for the test, to spud in early in March, has been let to J. W. Elliott. Capitol Oil & Natural Gas Co. has secured 320 acres and will drill the first of four tests in W half, Section 21–1–16w4. Calina Oil Co., headed by Emil Sick of Calgary, has tentative locations for its No. 1 well in LSD 4, Section 5-1-16w4, and LSD 14, Section 1-1-16w4. Southern Alberta Exploration Co.'s No. 1, LSD 8, Section 3-1-16w4, has derrick and camp complete and will spud in next month. Derrick Oils, Ltd., of Winnipeg, has subleased LSD 5, Section 7-1-16w4, from Geddes, Bletcher & Gayner of Lethbridge on cash and royalty basis, No. 1 test to spud in by June 1.

Auction sale of Red Coulee leases held recently at the Dominion land office at Lethbridge showed close-in acreage commanding substantial bonuses. Vancouver interests paid $1,175 plus filing fees and rentals for 40 acres in Section 15-1-16w4, and Madison Oils, Ltd., of Calgary, paid $2,500 for a 320-acre block in Section 34-1-17w4. C. J. Wallingford of Portland, president of the Canadian Kootenay Oil Co., operating in the Sage Creek, B. C., Field, secured considerable acreage, including an 80-acre block in Section 17-1-17w4, where a test is to be drilled.

Border Fields

In the Spring Coulee district, Alberta Pacific Consolidated's No. 1, Section 15-4-23w4, has completed fuel line from the railroad to location and is working on derrick and camp buildings.

In the Milk River district, Commonwealth Petroleums' No. 1, LSD 9, Section 9-3-15w4, is drilling more than 70 feet in the Devonian lime at 3,655 feet depth. Expectations of production at the Madison-Devonian contact were not realized, but a potential oil horizon is looked for about 200 feet in the Devonian. Capitol Oil & Gas Co.'s No. 1-A, LSD 16, Section 32-1-12w4, has resumed at 2,777 feet. The test set casing to shut off water at 2,762 feet and got some gas at 2,764 feet, and a show of crude at 2,777 feet, where temporary shutdown was made owing to bad weather.

In the Taber district, Cole-English Syndicate's Taber No. 1, LSD 3, Section 11-10-17w4, is reported shut down at 3,300 feet and seems likely to be abandoned. No official statement has been made in the absence of Campbell M. Hunter, now in England, but following unofficial reports of wet gas and green crude at 3,300 feet work was discontinued.

In the Lomond district, Hudson's Bay Oils' Lomond No. 2, Section 23-17-18w4, is preparing to resume at 925 feet after the winter shutdown.

In the Wainwright Field, east central Alberta, Onalta Oils' No. 1, LSD 8, Section 20-45-6w4, has finished new derrick and is rigging up new equipment to resume drilling at 1,925 feet, where a strong gas flow was struck. It will be carried deeper for oil. Weymarn Petroleums, Ltd., is continuing structure tests on its acreage, but is expected to locate its commercial test in March. Wainwell Oils' No. 4, LSD 15, Section 36-44-7w4, has recemented and is preparing for a production test.

British-Wainwright Oils' No. 1, LSD 13, Section 20-45-6w4, has been cemented back to 2,246 feet and will be put on production. This test was drilled some years ago to the sand and cemented, but water trouble developed. Recently it was taken over by Sasko-Wainwright Oil & Gas Co. and after being put in shape looks like a fair heavy crude producer. Production will be taken by Associated Refineries, Ltd.

It is expected the coming month will witness resumption of approximately 12 tests in the Wainwright Field. New tests likely to start work include Oil Selections' No. 1, LSD 13, Section 2-45-7w4; Lloyd's Petroleums' No. 1, LSD 12, Section 6-45-6w4; Fabyan Petroleums' No. 3, LSD 16, Section 18-45-7w4; Daugherty Petroleums' No. 1, LSD 4, Section 28-44-5w4.

British Columbia

In the Flathead Valley, southeastern British Columbia, Crow's Nest-Glacier Oil Co. is preparing to resume work. Crow's Nest's No. 1 on Sage Creek blew in last September and shortly after it bridged jamming the bit in the hole. Storage tanks will be provided this spring and the hole cleaned out and brought into production. It is planned to spud in Crow's Nest-Glacier's No. 2 this spring. Majestic Oil Co. is also planning to start a test.

Ontario Operations

In the Bothwell Field, Kent County, Ontario, Acme Gas & Oil Co. is reported drilling a shallow test for oil on the John Vogler farm, close to No. 2 Highway, on the north side of the Thames. Olga Oil & Gas Co.'s No. 2 deep test is reported drilling around 3,600 feet after entering the Trenton at 3,100 feet, and looks like a dry hole in the deep formation.

In Dawn Township, Lambton County, Union Natural Gas Co.'s No. 45 is drilling in Lot 19, Concession 1, Dawn Township, close to Union's No. 25, in the west end of the field.

In Dover Township, Kent County, Acme Gas & Oil Co.'s No. 4 is reported drilling around 625 feet. Olga Oil & Gas Co.'s No. 4, south of the Ajax No. 4 producer, is drilling.

A community test is being undertaken by Acme Gas & Oil Co., Olga Oil & Gas Co. and other Toronto interests on acreage near Colchester in Essex County. This is close to the location where Eagle Oil & Gas Co. of Toronto some years ago got the Trenton limestone at a high point.

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LA.-ARK. FIELDS

(Continued from Page 54)

for No. 1 Louisiana Long Leaf Lumber Co., in Section 4-7-11, 4 miles east of production, the first of five wells he is to drill on a block he got early in the Zwolle excitement, and Standard Oil Co. has location for No. 1 Nunn, in the NW SE, Section 32-8-12. Arkansas Fuel Oil Co. also has location for No. 1 Nunn, in the SW NE of the same section, and is building a road so they can get the rig to it.

Carterville Area

The Texas Company's No. 3 Peyton, Section 30-23-11, Bossier Parish, started the week for Carterville with 720 bbls. from sand at 3,137-50 feet as a slight extension. It was followed a day or two later by Louisiana Petroleum Co. and H. L. Hunt's No. 2 J. W. Peyton, Section 25-23-12, doing an estimated 1,000 bbls. from 13 feet of sand, total depth 3,131 feet, duplicating the performance of No. 3, completed the week before at 3,136 feet.

Six new locations were made in Carterville during the week and Muslow Oil Co. is reported planning 15 more. Also Muslow is reported dickering with two or three prospective customers, two of them major companies, for the sale of 760 acres of their holdings and their production, but so far confirmation of a trade is lacking.

Faced with the possibility of a town lot drilling scramble as the result of Lide and others' well, the town council of Zwolle has banned drilling within the fire limits of the town, consisting of about three blocks. Outside of this area operators will be charged a $100 fee and required to post a bond indemnifying individuals and the city in case of damage to property.

Magnolia Petroleum Co.'s No. 1 Rogers, NE SE, Section 21-23-12, was abandoned at 3,425 feet. It has a slight show of oil at 3,182-86 feet and salt water at 3,192 feet. Another test at 3,217 feet showed three or four joints of fuid and after setting 5¾-inch had about 100 feet of oil in the hole and swabbed a few barrels for a day or two. Another show of oil developed at 3,304 feet, but bailed dry. H. L. Morgan also abandoned his second deep test in Bellevue, No. 2 Wetherbee, second hole, Section 28-19-11, in lime at 3,208 feet without getting a show.

Three small pumpers were completed in Caddo Parish districts. Bayou State Oil Corp.'s No. 5 Owens, in Section 21-22-14, Hosston district, north of Pine Island, made 25 bbls., total depth 1,023 feet. Gulf Refining Co.'s No. 23-A Levee Board, Section 34-21-16, Oil City district, pumped 50 bbls., total depth 1,836 feet, and No. 24-A, in the same section, is a derrick. P. T. Mize's No. 1 Louisiana Oil Refining Corp., Section 1-20-16, Oil City, pumped 10 bbls., total depth 1,551 feet.

Claiborne Wildcat

Triangle Drilling Co.'s No. 1 Kilpatrick, Section 7-19-5, 18 miles southeast of Homer production in Claiborne Parish, is a well of some sort but just how big can not be determined at this moment. Bailed all day Saturday it was impossible to lower the fluid more than 1,700 feet from the surface. The oil is jet black and tests 29.5 gravity corrected, has more of kerosene than a gasoline odor and is coming from 8 feet of sand, total depth 4,540 feet. Two-inch tubing was set Sunday, but it would not flow more than to slop over a little oil through connections, although the well showed for 2,000,000 feet of gas a week or two ago. Apparently they have lost most of this gas but at the same time, after the well had stood over night pressure increased to 1,425 pounds.

Except for Marine Oil Co.'s No. 2-A Thompson in the Urbana district of Union County, Arkansas, completed two or three weeks ago making 700 bbls. from 3,535 feet, this is the first deep test in wildcat or proven territory in this division outside of Cotton Valley to produce during the deep drilling of the last two years.

Benedum & Trees Oil Co.'s No. 1 Johnson, Section 7-11-13, a wildcat on the east edge of the old Spider district of De Soto Parish, tested approximately 3,000,000 feet of gas on a 6-hour drill stem test. They had cap from 2,859-62 feet and porous lime to 2,865 feet total depth.

In the Gas District

In Morehouse Parish of the Monroe gas field J. B. Bond's No. 1 Haynes, Section 34-21-5, gauged 800,000 feet of gas at 730 pounds rock pressure with considerable salt water from the so-called Second sand, total depth 2,324 feet. United Carbon Co. abandoned locations for Nos. 2 and 3 Patton, in Section 2-20-4, and J. P. White's deep test, No. 1 Ches Wymond, Section 32-10-6, was abandoned at 3,025 feet, at which depth it was shut down last September. An old well deepened from 2,570 feet, only salt water developed from tests from 2,616 feet on down. In Ouachita Parish Hope Producing Co.'s No. 1 Fairbanks, Section 25-20-4, plugged back from the second sand at 2,382 feet, where it was dry, to 2,150 feet and gauged 4,153,000 feet of gas at the latter depth.

Richland staged another blowout when Arkansas-Louisiana Pipe Line Co.'s No. 1 A. E. Purvis, Section 34-17-6, hoisted liner through the crown, wrecking the top of the derrick with an estimated 63,000,000 feet of gas from 2,450 feet. It was subsequently shut in. Just south of it in Section 3-16-6 Hope Producing Co.'s No. 1 C. M. Purvis was completed, gauging 50,119,000 feet of gas, total depth 2,435 feet. Southern Carbon Co.'s No. 1 Hale, Section 16-16-6, tested salt water at 2,460 feet and recemented 6-inch set at 2,282 feet. Union Gas Products Co.'s No. 1 Hare, Section 22-19-5, Ouachita Parish deep test, is waiting orders after testing dry at 2,565 feet. J. S. Herkness' No. 12 Bowles, a second sand test in Section 18-20-5, is arranging to go deeper after getting salt water at 2,492 feet.

Magnolia Petroleum Co. drilled No. 1 Baker, Section 35-23-11, Sarepta district of Webster Parish, to 3,392 feet without improving on a show of gas at 3,054 feet and is plugging back to test that show of about 7,000,000 feet of gas and a spray of oil. Ohio Oil Co.'s No. 46 Bodcaw, Section 28-21-10, Cotton Valley, gauged 4,500,000 feet of gas from 9 feet of sand, total depth 4,689 feet. Palmer Corp.'s West Carroll wildcat, No. 1-A Marston, Section 11-19-10e, tested salt water at 2,404 feet and is drilling at 2,575 feet.

Arkansas' Poor Week

All Arkansas completions were failures. Wells that had been inactive for some time dropped from the report. Jones & Watkins' No. 1 Meek, Section 5-4-11, Grant County, carried for several years, had been inactive since reaching 1,450 feet. Charles McDonald's No. 1 Fogle, Section 18-14-16, Ouachita County, in the Mount Holly district, was abandoned at 2,301 feet. S. Y. Dorfman's No. 1 Simmons, Section 13-16-15, Union County, a wildcat 3 or 4 miles southeast of Smackover production, was abandoned at 2,081 feet, and Root Refineries' No. 8 Calloway, Section 4-16-15, was abandoned at 2,289 feet. S. H. Gardner's location for No. 4 Roquemore, in the B. C. Jordan Survey of Panola County, will not be drilled.

Anderson & Wimmer, who took over Flaucher and others' No. 1 Buck, a Mount Holly wildcat in Section 7-1-17, Ouachita County, abandoned at 2,475 feet, made a drill stem test at 2,680-90 feet and got nothing and got drill stem stuck at 2,727 feet. Modisette and others, who completed a 120-bbl. pumper in Section 14-18-13 at 2,235 feet last month, are rigging up for No. 1 Union Sawmill in the same section. Location is 4 or 5 miles east of Urbana, where considerable gas and some oil, both short-lived, were developed four years ago. Arkansas-Louisiana Pipe Line Co., drilling No. 1 Harms, Section 22-9-21, Pope County, made location for No. 1 Crutcher in Section 14-9-21.

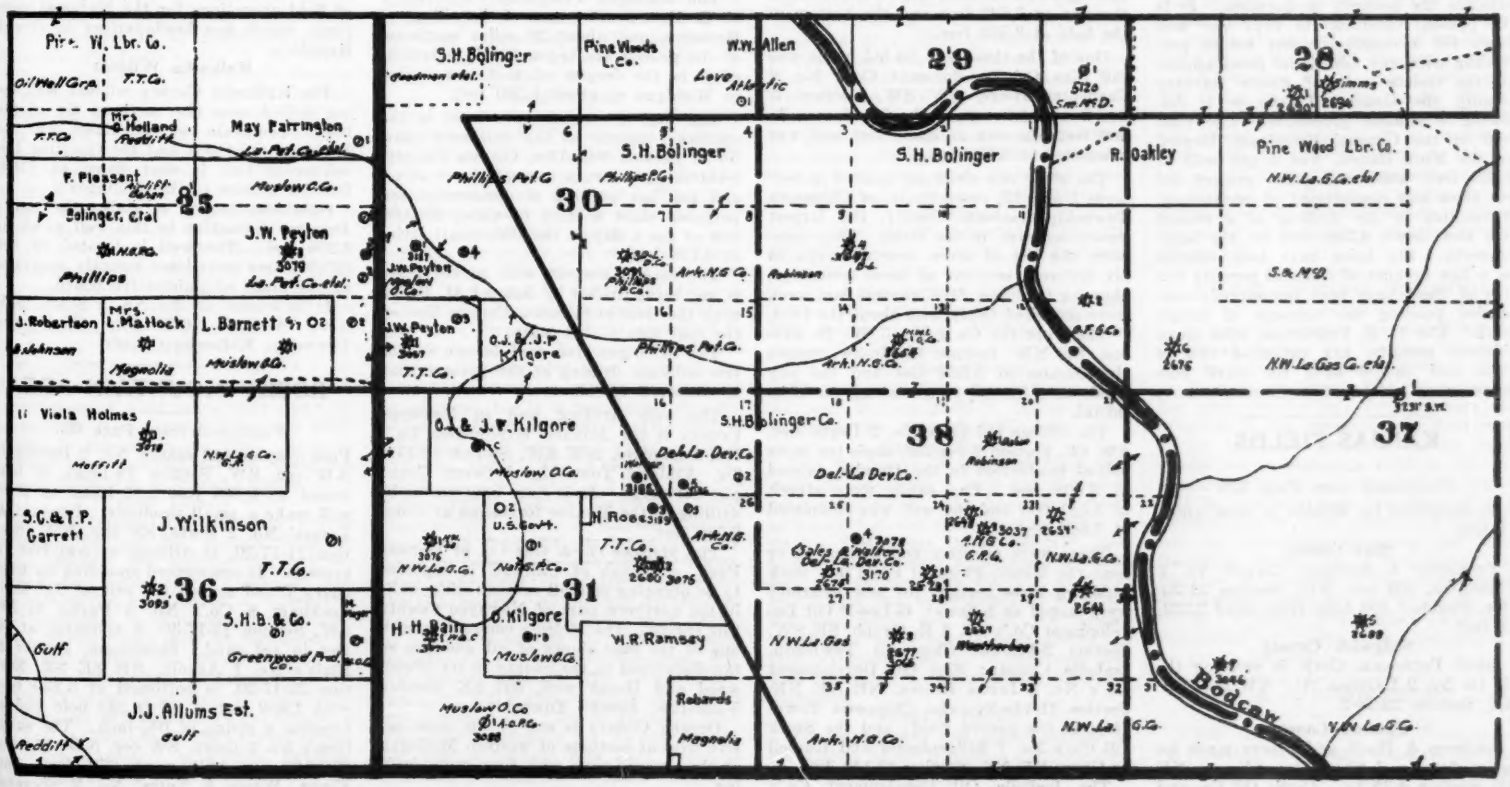
CALIFORNIA FIELDS

(Continued from Page 64)

development in this area. Between the General Petroleum's Needham property and the Honolulu's holdings, the Exeter Oil Co. has a tideland permit embracing 94 acres. The Exeter has already approved plans which contemplates early development of its tideland holdings at Rincon and the Honolulu is expected to start work on two 2,650-foot piers in order to facilitate the drilling of wells out beyond the tideland.

Elwood

Operators in the Elwood Field of Santa Barbara County have substantially reduced their current production since establishing a field potential of 65,000 bbls. daily and will no doubt fall into line as soon as their new allowable has been established by the operating committee, which is charged with the responsibility of reducing State production to 609,000 bbls. The Barnsdall and Rio Grande established an actual potential production of approximately 48,000 bbls. During the flow test wells Nos. 1 to 12 on the Bell-Luton lease made 1,703 bbls., 2,479 bbls., 4,443 bbls., 2,015 bbls., 2,497 bbls., 3,304 bbls., 3,978 bbls., 4,460 bbls., 2,887 bbls. 3,393 bbls., 2,161 bbls. and 3,291 bbls., respectively. On the Doty property, No. 1 made 1,744 bbls., while Nos. 2, 3 and 4 showed 2,296 bbls., 1,423 bbls. and 988 bbls. each. On Tideland permit No. 88 well No. 1 reached



Showing recent development of production in the 3,100-3,200-foot horizon in the Cartersville district of northeastern Bossier Parish, Louisiana, originally a gas field at 3,000 feet. Eight producers have been completed since the discovery of the deeper pay last November and 26 more are drilling for it, either by deepening old gassers or starting from the surface. The field extends northwest into Section 16-23-12, and southeast into Section 1-22-11, Webster Parish. Development for the deep pay has not progressed to the northwest beyond the section shown and to the southeast, across the parish line it becomes the Sarepta-Spring-Hill district of Webster Parish.

a maximum daily production of 3,339 bbls., while well No. 1 on permit No. 94 was clocked flowing 2,073 bbls.

No. 1 Bell-Luton, the discovery well of the Barnsdall and Rio Grande at Elwood, has netted more than $1,500,000 since its completion on July 26, 1928. Up to the close of January, 1929, the discovery well produced 922,212 bbls. of crude and 943,337 bbls. up to the present time. When the curtailment program was initiated at Elwood, the discovery well was beaned back to 900 bbls. per day. On the flow test recently concluded the discovery well came back after producing for 18 months doing 1,604 bbls. daily and at one time during the recent six-day flow test reached a maximum of 1,708 bbls. Since discovery, the Barnsdall and Rio Grande have produced 6,700,000 bbls. on the Bell-Luton lease. Two wells are under way on this property at the present time and one additional well each on the Doty, Tideland permit No. 88 and Tideland permit No. 95, making a total of five wells under way by the Barnsdall and Rio Grande at the present time. The Pacific Western Oil Co. recently spudded in No. 2 Goleta and has resumed drilling on well No. 2 on Tideland drilling permit No. 92. On permit No. 90 the Elwood Exploration Co. (Honolulu Consolidated) is rotating ahead in well No. 2 in a brown sandy shale at 3,450 feet.

Capitan

With two shallow wells already completed in the recently discovered Capitan Field of Santa Barbara County and the General Petroleum making preparations to finish No. 3 Erburu, the attention of operators was focused on the Oakburn Oil Co.'s No. 1 Wagner during the past week due to the picking up of the oil sand at 1,241 feet. This well, located on Tideland drilling permit No. 170, is expected to be given a production test within the next few weeks. This well will be watched with special interest as its completion will result in the drilling of several additional tideland permits. The Oakburn has spudded in four other wells on adjoining permits and will undoubtedly carry these projects down to completion if the initial project on the Wagner permit results in commercial production.

Carpenteria

In the Carpenteria district the Continental Oil Co. has made technical spuds in several tideland projects in order to validate the permits in question. It is the present intention to drill one well down for a conclusive test before proceeding with any additional development. In the Goleta area of Santa Barbara County the General Petroleum is following a similar procedure. The first well of the General Petroleum, located on the More Ranch, was a gas well at 4,533 feet, and, while this project did not show any commercial oil production, it resulted in the drilling of a second test now down 4,350 feet on the same property. Six holes have been started on a like number of tideland permits but five of them have been temporarily suspended pending the outcome of future work. The U. S. Petroleum, with three tideland permits, has validated two of them and should have the third hole down below 1,000 feet in the near future.

KANSAS FIELDS

(Continued from Page 53)

been completed for 40 bbls. in sand 3,066-71 feet.

Rice County

Producers & Refiners Corp.'s No. 1 Thompson, SE cor. NW, Section 21-20-10w, swabbed 300 bbls. from sand 3,329-31 feet.

Sedgwick County

Shell Petroleum Corp. is erecting the rig for No. 2 Lygrisse "C," NW cor. SW NE, Section 22-26-2.

Sumner County

Lathrop & Buell and others made location for No. 1 Showalter, SE cor. NE SE, Section 4-35-3w. Derby Oil Co. and others' No. 1 Norrish, NW cor., Section 35-34-2, is dry and abandoned at 3,547 feet.

SEVEN NEW OIL PRODUCING WELLS IN MOUNT PLEASANT, MICH., FIELD

By Special Correspondent

MUSKEGON, Mich., Feb. 24.—Seven new producing oil wells in the Mount Pleasant area were the most important completions in Michigan during the week ending February 22, 1930.

The seven new wells, one of which is located in the new Isabella Township Pool north of the city of Mount Pleasant, added more than 1,000 bbls. of initial production to the output of the Central Michigan Field.

The four largest of the new wells are located in Greendale Township, Midland County, where oil was first discovered in the field by the Pure Oil Co. in the spring of 1928. None of the wells, however, exceeded 400 bbls. initial daily flow.

Perhaps of greatest importance to the future development of the area was the completion of the Wittmer Oil & Gas Properties' No. 1 Mary West, NE NE. Section 25-15n-4w, Isabella Township, Isabella County, as a small producer in the Dundee pay sands.

This well last week looked like a duster due to a tightened formation but it was plugged back after striking bottom water, shot and swabbed 50 bbls. It is estimated to be good for 20 to 25 bbls. a day on the pump. Dundee limestone was topped at 3,608 feet with pay sands at 3,648-68 feet.

The Wittmer company now has three wells in the former wildcat territory in Isabella Township, Isabella County.

The largest of the four wells in Greendale Township, Midland County, on the east side of the proven Mount Pleasant Field, was the Pure Oil Co.'s No. 1 S. O. Vinton, NE NW, Section 18-14n-2w. It made 398 bbls. the first 24 hours from the Dundee formation. The formation was topped at 3,517 feet, pay sands at 3,540 and the total depth is 3,571 feet.

The Pure Oil Co.'s No. 2 A. N. Ward, SE SW, Section 7-14n-2w, was a close second with 370 bbls. initial production in the Dundee formation. Limestone was topped at 3,504 feet and pay sands at 3,533 feet with drilling suspended at 3,560 feet.

Pure Oil Co.'s No. 1 J. M. Coates, NW NW, Section 17-14n-2w, also Greendale Township, made 120 bbls. initial, striking the top of the Dundee high at 3,497 feet, the pay at 3,522 feet and the bottom of the hole at 3,560 feet.

One of the three new 50-bbl. wells was the Sias Oil Development Co.'s No. 4 Carpenter Heirs, SW SW, Section 7-14n-2w, which topped the Dundee at 3,506 feet, the pay at 3,538 feet and was completed at 3,572 feet.

The other two wells are located in Sections 1 and 12, respectively, of Chippewa Township, Isabella County, the largest producing area in the field. They complete the list of seven new oil wells in six different sections of three townships, showing that new developments last week were scattered fairly well about the field.

The Pure Oil Co.'s No. 5 W. D. Gibson, SE NW, Section 12-14n-3w, topped the Dundee at 3,524 feet and the pay sands at 3,560-88 feet, making 50 bbls. initial.

The Otsego Oil Co.'s No. 2 Retta Lee, SW SE, Section 1-14n-3w, made the same initial production in the Dundee, topped at 3,508 feet. Pay sands were struck at 3,541 feet and the well was completed at 3,563 feet.

There were no other completions in or near the Mount Pleasant Field last week although three permits for new locations were issued as follows: G-Lee-P Oil Development Co.'s No. 1 E. Grubb, SE SW, Section 2-14n-3w, Chippewa Township, Isabella County; Sias Oil Development Co.'s No. 3 James Brown, NE NE NE, Section 11-14n-3w, also Chippewa Township, in the proven field; and the Stork Oil Co.'s No. 7 Stilgenbauer and Russell or Coon, NE NE, Section 12-14n-3w.

The Isabella Oil Development Co.'s 10,000,000-foot dry gas well in the Marshall on the M. D. Keeler lease, NW NW, Section 10-16n-6w, Broomfield Township, Isabella County, has been shut in and plans are being made to drill several other wells to test the vicinity.

This well was the sensation of the Mount Pleasant area last week as it is located about 14 miles west of the city of Mount Pleasant and in rank wildcat territory.

Reports that the gas will be piped to Mount Pleasant for domestic and commercial use are prevalent but no official announcement has been made.

Only one completion and that a duster in the Dundee formation was recorded in the Muskegon oil field of Western Michigan last week.

It was the Laurel Oil & Gas Co.'s No. 1 E. Bragg well, started by Harry Harper and others about a year ago and located in SW NE, Section 15-10n-16w, Muskegon Township.

It was between a group of Continental Gas & Oil Co. pumpers in the upper Traverse oil pay sands but it made no commercial production in either the upper or lower Traverse and was dry in the Dundee.

A show of oil was struck at 2,094 feet, a show of gas at 2,104 feet, and bottom salt water at 2,114 feet. It will be plugged and abandoned immediately as the rig is to be moved to a new wildcat location to be made by the General Petroleum Co. south of Gratiot County.

The Citizens & Lake Shore Petroleum Co.'s No. 1 A. Heinz, NW SE, Section 8-10-16, Muskegon Township, had struck about 100,000 feet of gas a day in the lower Traverse formation and was to be drilled in immediately as the week closed. It was cased at 1,827 feet and gas was first struck at 1,865 feet.

Permit for one new location in the Muskegon Field was issued last week. It was the Globe Oil Co.'s No. 4 A. Luinstra, SE NE NE, Section 7-10n-16w, Muskegon Township. A rig is being moved in for the well.

About 10 wells are drilling on the Muskegon River flats where spring high water may soon impede drilling operations if mild weather of the last week continues.

Western Michigan Wildcats

The Michigan Petroleum Co.'s No. 1 C. E. Moe, 2 miles east of the village of Ravenna, and about 20 miles southeast of the proven Muskegon Field, is reported to be the deepest oil well ever drilled in Michigan at about 5,300 feet.

The well is located on a lease in the southeast quarter of the southeast quarter of Section 6-9n-13w, Ottawa County. Drillers have struck several shows of oil and gas but nothing of commercial importance since a show of about 250,000 feet of gas a day in the Cincinnati series at 4,776 feet.

The second deepest well in the state is one being drilled by Samuel M. Bacon near the Gratiot-Saginaw County line on the east side of the state.

The Michigan-Moe well is one of the few wildcats drilling at the present time in Western Michigan.

The only drilling well in Newaygo County is the Atlantic Exploration Co.'s No. 1 Brydges, NW SW, Section 12-11n-3w, Ashland Township, between Grant and Newaygo. It is now believed to be drilling in the Monroe formation at about 3,580 feet.

The Melrose Oil & Gas Co. of Melrose Park, a suburb of Chicago, is reported to be planning to drill several other wells in the northern part of Newaygo County this spring. The Melrose company struck one of the best shows of oil and gas so far discovered in the county in its Woodward and Hatch well, SE SE, Section 5-12n-12w, Brooks Township.

Oceana County is one of the most active wildcat sections of western Michigan at the present time with four wells drilling.

Edward DuVall, who last week had a fishing job on his No. 1 Schultz well, NW NW, Section 12-15n-18w, Golden Township, has succeeded in getting his tools out and is drilling ahead again at about 1,840 feet.

The No. 1 Vanderwaal, SW NE, Section 35-14n-17w, Shelby Township, near New Era, however, has a fishing job. Reports on the depth of the well vary from 3,000 to 4,200 feet. The lesser depth is more nearly correct as until two weeks ago the well had been shut down at 2,950 feet for several months.

The North American Trust's No. 2 Iroquois Oil Co., NE NW, Section 25-13n-17w, Grant Township, near Fruitvale, is drilling at about 400 feet.

The Red Rock Oil & Gas Co.'s No. 1 Skidmore, SW NE, Section 19-15n-18w, Golden Township, is about ready to land drive pipe at approximately 450 feet after having considerable trouble with quicksand.

Several Manistee and Mason County wildcat wells also are active in a section for which considerable activity is predicted for the coming summer months.

The Mid-Continent Development Co.'s No. 1 George Earley, NW NW, Section 19-6n-11w, Paris Township, Kent County, known as the Home Acres' well, south of Grand Rapids, is plugged and abandoned at 2,360 feet.

Wildcat Is Dry

The Wiser Oil Co., of Virginia, abandoned its second attempt to find oil in the vicinity of Plainwell, Mich., today after striking a show in the Traverse formation but no commercial production.

The well is located on the Lyle Allen farm, NE NE, Section 22-1n-11w, Gun Plains Township, Allegan County. It was drilled to a depth of about 1,700 feet after traces of oil and gas had been struck earlier in the week at a lesser depth.

The well has been plugged and is being abandoned as the drilling rig is being moved off location.

The Allen well was drilled after an unsuccessful attempt to find oil on the Humphrey farm, also in Allegan County.

Another well in Allegan County is nearing the Traverse formation and possible oil pay sands at 1,400 feet. It is the National Petroleum Co.'s No. 1 Oliver W. Gere, located NW NW, Section 13-3n-12w, Hopkins Township.

The permit for this well was taken out in the name of the Puritan Oil Corp. of Muskegon, original owners of the lease. Jacob Bolema, head of the Puritan corporation, is vice president in charge of field operations for the National company, which has headquarters in Grand Rapids.

Kalkaska Wildcat

The Kalkaska County wildcat well being drilled near the northern tip of the lower peninsula of Michigan by the Michigan Oil Corp. and the Grayling Development Co., is shut down at 1,950 feet for repairs to the drilling rig.

Operators expect to strike the upper Traverse formation in this well at about 2,200 feet. The well is located on the 165,000-acre state lease recently approved by the state administrative board.

It is known as the No. 2 State, NW NW, Section 16-26n-5w, Clearwater Township, Kalkaska County.

ROCKY MOUNTAIN AREA

(Continued from Page 60)

Pool, Naylor and others' No. 2 Danciger, NW cor. SW, Section 18-17-31, is bottomed at 3,605 feet and looks as if it will make a small producer. Leonard & Levers' No. 2 State, SE cor. NW, Section 21-17-29, is drilling at 540 feet in gypsum. It commenced spudding on February 7 and topped the salt at 310 feet. Lockhart & Co.'s No. 3 Parke, C SE SW, Section 15-17-30, is spudding at 30 feet in red sand. Henderson, Dexter & Blair's No. 1 Arnold, NE SE SE, Section 23-17-30, is bottomed at 3,250 feet with 1,800 feet of oil in the hole and is running a string of 6⅝-inch. The same firm's No. 1 Grier, SW cor. NW, Section 21-16-31, is drilling at 650 feet, and Flynn, Welch & Yates' No. 2 Stevens, NE SW, Section 13-17-30, is drilling at 600 feet. In the Lakewood area, F. B. Van Horn's No. 1 Santa Fe, SE SE,

Section 18-19-26, is drilling at 1,020 feet, and R. D. Compton's No. 1 State, NW cor., Section 2-20-25, is drilling at 550 feet and had a show of oil at 500 feet.

Chaves County

Warman's Oil Trust's No. 1 Blackdom, 1,320 feet from the north line and 990 feet from the east line, NE, Section 27-13-24, an old well being drilled deeper, is fishing for tools at 1,024 feet. The Cactus Petroleum Co.'s No. 1 State, SE cor., Section 14-10-26, is bottomed at 1,853 feet in lime and running the 6⅝-inch. It had 1,500 feet of sulphur water at 1,823 feet.

Valencia County

The Acme Development Co.'s No. 1 Santa Fe, SW cor. NW, Section 27-7n-4w, is reported in a sand in the Pennsylvanian at 4,630 feet with a show of oil and with some water in the hole. A test of the showing will be made before drilling deeper.

Luna County

The Angelus Oil & Mining Co.'s No. 3 State, NW SE, Section 20-21-10w, near Deming, is drilling at 4,785 feet in the Pennsylvanian formation.

Torrance County

H. L. Williams and others' No. 1 State (Staplin), NE cor., Section 16-8n-10e, is drilling at 1,741 feet and not yet in the top of the Pennsylvanian.

McKinley County

J. W. Hasell's No. 1 Santa Fe, SW SW, Section 17-18-9w, is drilling in the Mesa Verde at 3,070 feet.

UTAH

One new operation got under way in Utah this week when the Utah Southern Oil Co.'s No. 1 State, NE SW SE, Section 26-21-23, Grand County, began spudding. This is to be a test to the Pennsylvanian located on the Cisco structure near some shallow wells that were drilled several years ago. The company is making this test on the theory that the Colorado River structures south of Moab, where immense beds of salt were encountered, were in a deep sea basin and that the Cisco Dome is near the old shore line and better located for the accumulation of oil. The Dakota is expected at around 300 feet and the Pennsylvanian at 2,200 feet. The Continental Oil Co.'s No. 1 Boundary Butte, Section 22-43-22, San Juan County, is shut down indefinitely at 5,612 feet with the tools in the hole and the 3¾-inch casing parted off bottom. The Midwest Refining Co.'s No. 31 Pary, SW SE, Section 14-39-1w, Kane County, is drilling at 1,920 feet in red shale with the hole caving considerably. The 12½-inch is at 1,836 feet. The Florence Syndicate's No. 1 McCarthy, SW cor., Section 27-21-19, Grand County, is resuming after being idle for the past month on account of the cold weather. The 6¼-inch is on bottom at 1,945 feet. The Dakota is expected at 2,200 to 2,300 feet. The Cisco Springs Syndicate's No. 1 Moss, SE cor. SW, Section 9-20-23, Grand County, also is resuming after a shutdown on account of the cold weather. It is bottomed at 1,985 feet, near the top of the Dakota, where it was held up for some time by a fishing job. At last reports the tools had been recovered and cleaning out was in progress.

COLORADO

Favorable weather conditions in Colorado have resulted in some of the wildcats resuming after being shut down on account of frozen water lines and difficulties in moving in supplies. No completions were reported for the week, but several wells are at critical stages.

Bent County

The Continental Oil Co.'s No. 1 Pipe Springs, NE cor. SE, Section 27-27-49, Bent County, the deepest well so far drilled in southeastern Colorado, has landed the 5⅞-inch casing at 5,504 feet and succeeded in shutting off the water from above. The hole is bottomed in sand and drilling has been resumed.

Archuleta County

The Outwest Investment Co. has taken over the rig and holdings of the Standard Oil Co. of Colorado on the Chromo Dome, 22 miles southeast of Pagosa Springs, and is preparing to commence spudding in on its No. 1 Fitzhugh, NE NW SW, Section 34-33-1e. Among those identified with the Outwest company are L. M. Garnett, B. C. Slade, S. H. Weber and W. M. Hackathorne. The company has 18,000 acres covering two structures. The Chromo test will go to the Sundance horizon.

Huerfano County

The Parker Club, Inc.'s No. 1 Fee, Section 4-28-68, Badito-Alamo Dome, joint with the Kinney-Coastal Oil Co., has resumed drilling after thawing out frozen water lines. It topped the Muddy at 3,970 feet and is drilling at 4,005 feet with 2,400 feet of water in the hole. Last cuttings showed a little shale and carried rainbows of oil.

Las Animas County

The Helium Co.'s No. 3 Morris-Cowdrey, SW cor. NW, Section 35-29-60, Model Dome, is rigging up.

Montrose County

The Uncompahgre Oil & Gas Co.'s No. 1 Colorado, SW NW, Section 27-50-10, near Olathe, is resuming at 2,031 feet after being idle for some time. Last fall it was reported that the well would be abandoned and another hole started, but the tools have been sidetracked and cemented off and the hole will be carried on down to the Shinarump conglomerate expected at around 2,500 feet. It had a show of oil in the Sundance at 1,450 feet.

Rio Blanco County

The White Eagle Oil & Refining Co.'s No. 1-A Fordham, NW SW, Section 9-2s-96, Piceance Creek, is preparing to resume after being idle on account of frozen water lines. It is bottomed at 3,005 feet. The first work will be to continue underreaming the 8¼-inch from 2,885 feet to bottom. The crew went in this week and is getting everything ready for the resumption of drilling. There has been no important change since it ran into considerable wet gas at 2,810 feet. The Texas Production Co.'s No. 1 Potter, NE SW, Section 30-2n-96, White River, is coring at 5,750 feet. It cut a vein of coal at 5,673-78 feet.

Fremont County

The Continental Oil Co.'s No. 2 Harding, NE SW, Section 21-18-70, Orchard Park area, north of Canon City, which is to be a 3,000-foot test in a new district, is drilling at 160 feet in black shale. This is a joint operation with the Canon Heights Oil Co. The Continental's No. 4 Steinmier, SW SW, Section 35-18-70, Canon City district, is drilling at 1,650 feet.

Yuma County

The Phillips Petroleum Co.'s No. 1 Andrews, NW NW, Section 3-2s-42, Rosenkrantz structure, is drilling at 4,891 feet (corrected) with hole full of water from upper horizons and still carrying the 6⅝-inch.

Weld County

The Platte Valley Petroleum Co.'s No. 1 Patterson, SW SW, Section 24-6n-61, Greasewood Dome, is drilling at 4,964 feet in cavy shale and carrying the 4¾-inch close behind the tools. The shale continues to show a little gas.

Moffat County

Craig, the county seat of Moffat County, probably will have natural gas at an early date. A. A. Odlum, of Denver, has given notice that a formal application for a franchise will be presented to the city council on February 26. It has not yet been revealed what interests are behind the move or where the gas will be obtained, but it is understood that the supply probably will come partly from a Wyoming structure and partly from a Colorado field. The Uintah Gas Co., which last year installed a line from the Ashley Valley Field to Vernal, in Uintah County, Utah, also, is making application for a franchise at Craig. It proposes to bring the gas from the Thornburg Dome south of the Iles Field where the Continental Oil Co. has several gas wells shut in. These wells were drilled by the Marland Oil Co. The Midwest Refining Co.'s No. 19-SD Parkinson, SW NE, Section 22-4n-92, Iles Dome, is bottomed at 2,316 feet in hard gray shale and running the 13-inch at 2,032 feet. The same company's No. 24 Hannewalt, SE, Section 4-6n-92, Bell Rock Dome, is bottomed at 1,300 feet in sandy shale and fishing for tools. The Texas Production Co.'s No. 12 Knowlton, SW SE, Section 33-5n-91, Moffat Dome, is about ready to commence spudding. The same company's No. 1 Berlin, SW NE, Section 19-12n-100, Bartram Dome, is resuming at 2,347 feet. The Mountain Fuel Supply Co.'s No. 1 Lasher, NE NE, Section 25-12n-101, is drilling at 1,556 feet, and its No. 1 Wheeler, SE NW NW, Section 30-12n-100, is digging cellar.

Larimer County

The Continental Oil Co.'s No. 5 Scott, NE NW, Section 6-9n-68, Wellington Dome, is drilling at 2,190 feet. The city council of Loveland has granted a gas franchise to the Colorado-Wyoming Pipe Line Co. and the line that company is building from a connection with the Amarillo-Denver line of the Colorado Interstate Gas Co. to Fort Collins will be tied into the local system. The Standard Oil Co. of Colorado also had an application for a franchise pending which was denied by this action.

WYOMING

Reports reached here this week of a well being drilled in the Osage Field in Weston County, northeastern Wyoming, breaking loose and flowing 800 bbls. in 18 hours. While verification has not yet been received, the circumstances are such as to give credence to the report. The well was drilled by the Osage Oil Trust in Section 14-46-63, according to the information received, and reached the sand at 1,612 feet several weeks ago. It looked good for around 100 bbls., but had not been tested as it was necessary to run some casing and clean out. This was finished and the hole was drilled a few feet into the sand. The Osage Field was discovered in 1920 and some good wells have been brought in, but the acreage is spotted and the conditions were not attractive to the major operators who soon pulled out after drilling a number of tests. However, it has been profitable for some of the smaller operators. The oil comes from the Muddy sand which is very lenticular and where it is sufficiently thick, some profitable producers have been drilled. The only blanket sands found, the Dakota and Lakota, carry water. It is probable that the Osage Oil Trust's well found the Muddy sand at a location where fractured formations and a thicker sand permitted a greater accumulation of oil than usual.

Park County

The Ohio Oil Co.'s No. 1 Burlington, SE SW, Section 21-53-101, Shoshone Dome, is drilling out cement at a total depth of 4,312 feet. The Midwest Refining Co.'s No. 31 Rosenberg, SW cor. NE, Section 25-58-98, Frannie Dome, is bottomed in gray shale at 1,338 feet and underreaming the 13-inch at 1,282 feet. George Arnett and others' No. 1, SE SW SW, Section 24-58-97, 700 feet north of the discovery well, has derrick up. Virgil M. Kirk has the drilling contract. There was practically no news from the Oregon Basin Field this week, there being no completions and no new wells started.

Salt Creek

The Midwest Refining Co.'s No. 29-DT, NW, Section 35-40-79, the deep test, is drilling at 3,640 feet.

Hot Springs County

The Ohio Oil Co.'s No. 1 Smith, SE NE, Section 9-46-99, Walker Dome, is drilling at 3,130 feet.

Big Horn County

The Ohio Oil Co.'s No. 1 Union Gas, NE cor., Section 22-56-97, Byron Dome, is fishing for pipe at 4,607 feet.

Carbon County

The Producers & Refiners Corp. has resumed operations in only one of its several wells which have been shut down on account of the cold weather. This is its No. 2 Mahoney Dome, SE NW, Section 34-26-88, which is bottomed at 4,562 feet and running the 6¼-inch at 3,900 feet. This test is supposed to be about 200 feet below the top of the Embar which has never before been drilled on this structure, but no information has been given out as to what has been encountered.

Fremont County

The boilerhouse and pump station of the Dallas Dome-Wyoming Oilfields Co., 16 miles south of Lander, was destroyed by fire the past week. The building, boiler equipment, pumps and dehydrating

(Continued on Page 154)

INDEX REPORTS REAL WILDCAT OPERATIONS

CASPER, Wyo., Feb. 22.—In a round up of wildcat field operations from states in the far north and northwest the Inland Oil Index publishes the following interesting developments:

Drilling for oil has started in Coos County, Oregon, by California interests. The location is near Coquille. Hole is to be continued to 6,000 feet if necessary.

Union Oil Co. of California is still drilling near McGowan on the lower Columbia in the State of Washington. Total depth of hole is 3,200 feet. Contract calls for 4,000 feet if necessary.

In South Dakota

Dillon Oil & Development Co., NW, Section 24-10s-1e, Provo structure, South Dakota, is getting ready to shut off water before entering the thin Fuson formation overlying the Lakota. There was only 24 feet of Dakota which carried water. Hole is bottomed at 1,242 feet and the well should be an early completion. The formation is checking closely with that of Mule Creek in Wyoming which is only 12 miles west of the Provo structure.

Geologists and lease men have been active in the last several weeks in the Hay Canyon district, South Dakota, with the result that several thousand acres of land have been leased for oil and gas on short time contracts for drilling operations to start. Messrs. Fenton & Marty have been the most active in securing leases.

Well of the Black Hills Petroleum Co. on the Barker structure in Custer County, South Dakota, is still shut down awaiting more favorable weather conditions before putting it on production. In the meantime additional tankage will be erected and a plane table survey is being made by C. T. Lupton, Denver geologist who located the first well.

The Black Hills Petroleum Co. is fully financed and has taken all treasury stock off the market. After completing survey, Mr. Lupton will spot locations for two more wells on the structure and drilling will begin early next spring.

Distillation Test

A distillation analysis of crude petroleum from the well of the Black Hills Petroleum Co. on the Barker structure in southwestern South Dakota is reported to show 20 per cent gasoline and 17 per cent kerosene with a high grade of lubricating stock. If this analysis is correct, it makes it one of the best grades of black oil in the Rocky Mountain region.

Hot Springs, S. D., boasts the only free filling station in the world. To advertise to the world that South Dakota has joined the column of oil producing states, the Black Hills Petroleum Co. has placed a barrel of crude petroleum from its well on the Barker structure on the sidewalk with a placard thereon of "Help Yourself." The novel station is liberally patronized.

A.S.T.M. DETROIT MEETING

A regional meeting sponsored by the American Society for Testing Materials will be held at the Book-Cadillac Hotel in Detroit on March 19. The meeting has been divided into two sessions, the program in the morning will deal with metals and the afternoon session with miscellaneous materials used in the automotive industry. A total of 12 papers will be presented and the three of particular interest to the petroleum engineer will be "Corrosion Resisting and Heat Resisting Steels for Automobiles," by Charles M. Johnson; "The Significance of Various Tests for Motor Fuels," by R. E. Wilson; and "The Significant Properties of Automotive Lubricants," by H. C. Mougey.

V. O. C. PRODUCTION

NEW YORK, Feb. 24.—Venezuelan Oil Concessions, Ltd., reports for the week ended February 15, production of 131,266 metric tons of crude oil in Venezuela. This compares with 131,584 metric tons in the previous week.

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FOR SALE—Used American Marsh Steam Pumping Engines, 2—6X36 and 5—7X24. 7,000 feet Regular 2-in. 4½ lb. and 5,000 feet Upset used LW tubing. Elliott Machine & Supply Co., Depew, Okla.

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FOR SALE—1 6x10 Fairbanks Morse Power Pump complete. 2 4x10 Fairbanks Morse coalinga Pattern Power Pumps complete. These pumps are new and are offered at half price. Write P. O. Box 1777, Houston, Texas.

BARGAIN

One 28 Star Machine, Three stems, plenty of tools, some fishing tools, 1,500 feet of 6¾-inch one run pipe. Located near Steamboat Springs, Colo. Two miles from railroad. Also one Sanderson Cyclone Spudder Gas Engine, good for 1,500 feet. String of tools, 6 and 8-inch bits. Located near Pueblo, Colo.
Write Dr. D. D. Costigan, Trinidad, Colo.

FOR SALE
Standard rig and string of tools. Or will trade for proven acreage or royalty. Dorsey E. Straitiff, Box 592, Casper, Wyo.

FOR SALE—EQUIPMENT

FOR SALE—Low Pressure Gasoline Absorption, Capacity of Compressors 1,750,000 cubic feet per day. Absorption Unit 8,000 gallons. Located Central Texas. H. H. Adams, W. T. Waggoner Building, Fort Worth, Texas.

FOR SALE—Machine Tools, 24-inch by 16-foot Lodge and Shipley Lathe and 30-inch by 20-foot Grd. Head M. D. Taper Att. and 24-inch Crank Shaper Single Pulley. Bargains. Location, Kansas.
Elliott and Stephens Machinery Co.,
St. Louis, Missouri

FOR SALE—by owner. 60,000 feet 2-inch to 6-inch Line Pipe, Gas Engines, Compressors, Vacuum Pump, Tanks, Buildings. All miscellaneous equipment of gasoline plant which we are dismantling 2½ miles southeast of Broken Arrow, Okla. Arrow Gasoline Co., P. O. Box 434. Tulsa, Okla.

FOR SALE OR TRADE
Reconditioned pipe, casing and Oil Field Supplies. Also Gasoline Plant Equipment. Lee Morrison Supply Co., Bartlesville, Okla. Branch yd. at Sand Springs, Okla.

FOR SALE—Complete Compression Gasoline Plant with Miller DC engines, tanks, etc. Condition Good. Near Tulsa. Riddle 4-1618.

BUSINESS OPPORTUNITIES

OUR EUROPEAN OIL FINDER is available for making drilling locations The manufacturer of this instrument guarantees successful drilling locations D. C. Oliphant, 19 West 44th Street New York

SMALL KANSAS CORPORATION oil and gas developing company with several complete standard outfits for turnkey drilling either wildcat or proven acreage, including derrick tools and casing. Have several good bottom hole contracts. Needs advance money for payroll, fuel, etc. Can give good return with safety. Also good opportunity for parties with capital to connect with reliable operators having good office and field organization. Write Box E-63, The Oil and Gas Journal, Tulsa, Okla.

OIL LOCATED before drilling. Geophysical method. Toggodometer Instrument; take pay in oil. No oil, no pay, except traveling and testing expenses. 95 per cent accuracy. O. P. Coffin, Caddo, Tex.

U. S. Royalty Corporation
Organized by well known oil men and geologists. Write today for information. C. A. Johnson Bldg., Denver, Colo.

FOR SALE—Whitetail Oil Syndicate Units, at par $100.00, covering 47,000 acres, now drilling, N. E. Montana. Good geology. G. H. Lowe, Trustee, Neillsville, Wisconsin.

FOR SALE, or lease, on royalty basis a combination Gas Regulator and Safety Device. Patented. For full information write P. O. Box 14, Wilmot, Kansas.

FOR SALE—One-half interest in paying Tractor operated farm, 6,000 acres fertile plains land, solid body. Will return better than 10 per cent net and increasing in value. Located on approved structure, all minerals intact. E. L. Woodley, owner, Ropesville, Tex.

OKLAHOMA CITY Field drilling site in SW¼, 25-12n-3w, for a well, to responsible company. A. N. Wooldridge, 1123 N. Broadway, Oklamhoma City, Ok.

YOURS for fewer wells, but better wells, and less failures. Particulars about my instrument and method of locating, free and without obligation. Address Box E-120, The Oil and Gas Journal, Tulsa, Okla.

MINERAL RIGHTS FOR SALE
170,000 acres northern New Mexico. Some coal. Structure favorable for oil. K. A. Heron, Chama, N. Mex.

BUSINESS OPPORTUNITIES

HAVE GOOD DEPOSITS gold, silver, lead and copper near highway just opened. Need concentrator to work ore on ground. Will give bargain. C. J. Greene, Sells, Arizona.

BLOCK 1,400 Acres. Well being drilled close. For sale. Will divide for test. Good structure. Located in Indiana. Address H. Fisher, Terre Haute, Indiana.

SUB-ZERO WEATHER, January 17th, last, blew in Chapman's gusher wildcat Abbot, S. E. Williamson County, Texas, on long-known Luling-Mexia-Fault Strike, 2½ miles from Milam County line. I have an honest-to-square-shooter, solid gold, lead pipe cinch proposition in Milam County by Major Company's drill stem proved-up geology under Luling-Mexia Fault, to put in hands of oil men with money who know their stuff. Been here ten years; got the low-down dope on all that's been done. Four wells got saturation oil and gas. Come see me. C. F. Drake, 716, Rockdale, Texas.

A PRACTICAL OIL OPERATOR has definite plan that will secure 500,000 or more choice acres in Mid-Continent fields without paying cash rentals or bonus. A company must be formed and sufficient initial financing arranged to commence drilling one well; thereafter deal will more than finance itself. Will divide equally with those assisting me to take advantage of this remarkable opportunity. "Believe it or not," this is the biggest and best oil deal out of doors. Arrange interview in answer. Address Box E-123, The Oil and Gas Journal, Tulsa, Okla.

YOU can make BIG money helping to develop the gold mining industry of Colombia, South America. For particulars address Davidson, 201 First National Bank, Denver, Colo.

A NEW CABLE-TOOL BIT, patent 1698873, designed for soft or sticky formations, to compete with a rotary in speed. I have been using one similar for four years on a small machine with wonderful success and now want it introduced. Other interests prohibit me giving this my personal attention, so would like to make a deal with some responsible party to handle patent on percentage, or would sell outright. Contractor, if you want to try me out, will send dope to any tool shop. Patent brokers save your stamps. R. Burke, 225 Oxford, Lindsay, Calif.

EXCHANGE for acreage of equal value five lots in Aurora, Colo. For full information address Albert Hammer, Wallingford, Conn., R. D. No. 1, Box 55.

STRUCTURES WITH ACREAGE READY FOR DRILLING. Experienced graduate geologist and civil engineer makes careful studies, maps and reports; acquires acreage for oil and gas development. Offers excellent opportunity for investment. Write Box E-100, The Oil and Gas Journal, Tulsa, Okla.

POSITIONS WANTED

PURCHASING AGENT. With a background of 18 years experience in oil and gas engineering field work wishes to make a change. Engineering education and an experienced executive. Write Box E-68, The Oil and Gas Journal, Tulsa, Okla.

GAS ENGINEER with 18 years experience in all phases of oil and gas work, desires position as gas engineer or superintendent. Correspondence desired. Write Box E-67, The Oil and Gas Journal, Tulsa, Okla.

GEOLOGIST: Ten years experience in consulting work. On account of heavy loss by fire seeking temporary or permanent position. Familiar with Kansas shale gas. Write Box E-106, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED
Gas Tester and Meter Man. Five years experience in Oklahoma and Texas. Mid-Continent field preferred. Capable of taking charge of Gas Department. Ten years previous experience as Civil and Mining Engineer. Write Box E-114, The Oil and Gas Journal, Tulsa, Okla.

POSITIONS WANTED

REFINERY DESIGNER-DRAFTSMAN, three years refinery and several years structural experience, open for position. Write Box E-112, The Oil and Gas Journal, Tulsa, Oklahoma.

ENGINEER, MECHANICAL and electrical executive, design, construction and operation desires connection with responsible concern. Write Box E-116, The Oil and Gas Journal, Tulsa, Okla.

TRAVELING AUDITOR AND ACCOUNTANT experienced, thoroughly familiar and capable of handling all phases of Oil Industry Accounting. Domestic and Foreign Experience. A-1 references, surety bond, and no drinker. Desires position with a reliable company. Available about March 1. Write Box E-121, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED CHEMIST AND FORMER SUPERINTENDENT with ten years actual work to credit desires position in refinery. References. Write Box E-122, The Oil and Gas Journal, Tulsa, Okla.

PRODUCTION ENGINEER AND DRILLING SUPERINTENDENT. Until recently in complete charge of 12 strings of rotary tools and a daily average of 25,000 bbls. Production for 6 years, desires to contact with ambitious company or individual whose object is to take advantage of present depression to secure a substantial production cheaply. Am thoroughly familiar with all phases of oil industry and am competent to assist in organizing new company. Want interest in company or deal for services. Will travel reasonable distance from Tulsa for interview with responsible people. Write Box E-125, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

MECHANICAL ENGINEER wanted by Established Oil Well Equipment Manufacturers. Must be thoroughly experienced in designing and developing Rotary Drilling Equipment. Splendid opportunity for the right man. References and full information as to experience must accompany application. Write Box E-113, The Oil and Gas Journal, Tulsa, Okla.

WANTED
Technical expert with experience in and capable of Design, Construction and Operation of carbon black manufacturing plants with experience in testing methods and apparatus and with knowledge of analytical methods of determining quality of carbon black suitable for various industrial applications. Must be willing to go abroad. Write full particulars. Answer Box E-111, The Oil and Gas Journal, Tulsa, Okla.

REFINERY SUPERINTENDENT
To take charge of small skimming plant for Company with established markets. Applicant must be thoroughly familiar with treating gasoline and kerosene. In answering give full details as to references, experience, salary expected and when able to report for duty. Write Box E-117, The Oil and Gas Journal, Tulsa, Okla.

SALESMAN WANTED—Mill manufacturer line pipe and oil country goods desires experienced pipe salesman for Mid-Continent Field. Write giving full details of experience. All references will be treated confidentially. Answer Box E-119, The Oil and Gas Journal, Tulsa, Okla.

WANTED: GAS ENGINEER BY OLD MID-CONTINENT OIL CO. University trained, some practical experience in deep pressure and flow. Apply or write 418 Atlas Life Bldg., Tulsa, Okla.

WANTED: MECHANICAL OR CIVIL ENGINEERS, BY RELIABLE MID-CONTINENT OIL CO. University trained men with some gasoline plant or gas lift construction experience. Apply or write Personnel Office, 418 Atlas Life Bldg., Tulsa, Okla.

WANTED: TWO GRADUATE GEOLOGISTS BY RELIABLE MID-CONTINENT OIL CO. Experience not absolutely necessary. Give age, education and pertinent details. Address Box E-102, The Oil and Gas Journal, Tulsa, Okla.

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LEASES—PRODUCTION

NESS COUNTY, KANSAS, 7/8 Lease, 400 Acres 36-17-16w, near Continental Well. $25.00 per acre net.
516 Petroleum Bldg.,
Oklahoma City, Okla.

FOR LEASE—25,000 acres Prospective Oil Land in Coahuila, Mexico. Rights confirmed to owner by Mexican Government. S. R. Gonzales, Naranjo 2, Altavista. Tampico, Mexico.

OIL LEASES—In and around the fine productive oil fields of Texas. Will sell blocks of acreage of any size. If it is money that you want, get in touch with me. N. M. Bullock, Rockdale, Tex.

FOR SALE Oklahoma, Kansas and New Mexico 5 and 10-year oil and gas leases in large and small blocks. Also Oklahoma and New Mexico royalties. Robert O. Zielinski, 12836 Wood St., Blue Island, Ill.

HAVE LARGE BLOCK OF ACREAGE under lease in Pa. which has been approved by one of Pa.'s practical geologists. Will give two or three blocks of 2,000 acre each or checker board throughout the field for a contract for the drilling of said wells, agreeing to sell me the gas. Unusual opportunity. For particulars address Box 256, Mansfield, Ohio.

BUY CHEAP LEASE and royalty in Western Oklahoma ahead of development. For particulars write George F. Fisher & Son, 607 Cotton Exchange Bldg., Oklahoma City, Okla.

COOKE COUNTY, TEXAS, LEASES
Five year leases one to three miles from well now drilling. Good geology. $3.00 to $8.00 per acre. W. R. Andrews, Box 7, Gainesville, Texas.

FOR SALE—Oil and Gas Leases, shallow field, Anderson County, Kansas. New development started. Cash and drilling contract wanted. W. L. Morris, Garnett, Kansas.

WANT TO LEASE Section of Hamilton County, Kansas land for oil and gas opportunity. Frank Draper, Route 3, Seymour, Iowa.

FOR SALE—Leases and Royalties, Lincoln, McLean and Grady Counties, Okla. Bandara, Edwards, Kinney and Val Verde Counties, Texas. Bloch, 3-8114. P. O. Box 531, Tulsa, Okla.

OWNERS OF APPROXIMATELY 13 THOUSAND acres in northeast Clark County, Kansas, have joined together in a well situated block, clear of all leases, excepting approximately five hundred acres. Would like to lease block to financially responsible parties, who are able and willing to carry through development of any oil possibilities which may exist. Write Box E-118, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE: Oil leases and Perpetual Warranty Deeded oil royalty located in the active areas of New Mexico's great Potential oil fields, Lea County. Huge profits are being made. Why not get in now? Prices are yet low. Write for information and late oil development map free. Monarch Inv. Co., Roswell, N. M.

FOR SALE quick gamble, 80-acre lease direct offset to Wilcox sand test, Twenty-five dollars per acre. Well now drilling below 1,800 feet on proven high. P. O. Box 845, Muskogee, Okla.

LEASE AND TWENTY PRODUCING WELLS. About 1,200 barrels daily. Muskogen, Michigan, field. J. B. Azbill and Company, Inc., Paul Brown Bldg., St. Louis, Mo.

60-ACRE LEASE, Van Structure, NE $7 per acre. ⅛ of landowner's royalty free. Tyler, 1130 Cedar Hill Ave., Dallas, Tex.

LEASES—PRODUCTION

FOR SALE—25,000 acres, 10-year paid up leases, Uvalde, Edwards, Kinney, Bandera and Real Counties, Texas. No rentals. $1.35 per acre. L. W. Stieren, Alamo Bank Bldg., San Antonio, Tex.

WEST TEXAS mineral lands $2.50. Ten and twenty year leases, $1.25 and $1.50. Joe Cunningham, Big Spring, Texas.

FOR LEASE: Oil and gas rights on eleven hundred acres northwest of Stinnett in Hutchinson County, Texas. George B. Lucas, Austin, Texas.

I HAVE A DRILLING PROPOSITION that will interest you in the newest shallow sand oil and gas producing district of Western Kentucky. Write me for particulars. Joel Bailey, 310 Mercantile Bank Bldg., Evansville, Indiana.

SHOULD OPEN AN OIL FIELD
Have started operation for drilling on wonderful structure in Colorado near New Mexico line, that looks like a sure shot for oil. Have already moved in tools and completed 84-foot derrick, ready to spud in. If you are interested in some close-in leases, feel sure that $100 or $200 invested may make you a fortune. Will send full particulars on request.
Out West Investment Company,
Continental Oil Building,
Denver, Colorado.

LEASES
On account cut in crude can sell some well located oil and gas leases in Blanco-Kendall - Uvalde - Kinney - Edwards - Val Verde Counties, Texas, 10 cents an acre and up. Also some royalties. Now is time to buy. Write Universal Agencies, 415 Moore Bldg., San Antonio, Texas.

LEASES
Ten Thousand Acres, Ten years paid up (no rentals) oil and gas leases, Edwards and Val Verde Counties, Texas, at 75 cents acre. Will sell part. A. C. Smith, P. O. Box 200, San Antonio, Texas.

WILL SELL NEW LEASE N. W., Quarter 7, 12N, 2 Esst, Lincoln County, Oklahoma, $4,000.00. 11 miles from Nicoma Park well and about 15 from Chandler field. Land unencumbered and on crest of divide field between Deep Fork and North Canadian. G. A. Minnich, Carroll, Iowa.

OKLAHOMA DRILLING BLOCK
800 acres on well defined structure in Township 26-27 N., Range 3 W., Grant County. New ten year leases, Want Development.
L. A. Ferrel, Hennessey, Okla.

FOR SALE. All, or part of my Proven and Semi-proven Oil and Gas leases and royalties in Ark., and La. New Fields. Must drill four wells soon. To right party will give enough time to raise money. Price $50,000.00. For particulars address J. S. Dashko, El Dorado, Ark.

REJUVENATE YOUR OLD WELLS
Production expert will contract to increase the production from your deep or shallow well for a portion of such increase. The average well is producing only about 60 per cent of its potential output. Water troubles corrected. Wells deepened through shot cavities. New Vacuum pump installed. No extra equipment required. Will take contract anywhere in U. S. Conference solicited. Address Box E-124, The Oil and Gas Journal, Tulsa, Okla.

40 ACRE LEASE on well defined structure 1¾ miles S. E. of Gulf Well now drilling in Wood County. Price $15.00 per acre. L. D. Bertillion, Mineola. Texas.

WILL SELL ¾ working interest in 210 acre lease near discovery well, New Niagara, Henderson County, Ky., pool 60 days to start first well. Address Suite 9, No. 13,708 Madison Ave., Cleveland, Ohio.

OFFER HALF INTEREST 600 acres with well drilled 850 ft. on top Mississippi lime for $2.000. Half mile to prolific new production. Write Contractor, Apt. 306, Northern Bldg., Wichita, Kansas.

ROYALTIES—PRODUCTION

FOR SALE—ROYALTIES. Belcones Fault, L. W. Stieren, Alamo Bank Bldg., San Antonio, Tex.

STEVENS COUNTY and other Western Kansas Counties and Beaver County and other Western Oklahoma Counties royalties and leases.
Sain and Company, Liberal, Kans.

WINKLER COUNTY ROYALTY
Winkler Pool 1 acre or more east half Sec. 24, Blk. B-26, at $100.00 per acre. Perpetual Royalty.
Hobbs Pool, Lea Co., N. Mex.
Perpetual, participating. 1 acre or more at $50.00 per acre.
Masterson Pool, Pecos Co.
Perpetual Fee Royalty under 8 sections. Surrounding well at $50.00 per acre.
Robert E. Ellis, San Angelo, Tex.

NEW ROYALTY LIST. Van Zandt County, Texas; also Okla. and Kans. royalty. Harry Haynes, Grantville, Kansas.

ROYALTY INTERESTS, Van Zandt, Smith, Wood, Henderson, Anderson and Ector Counties, Tex. Lists and maps. James R. Haynes, Grantville, Kan.

WANTED—From owners only, Texas and Oklahoma small producing royalties. Give full particulars first letter. W. T. and C. C. Doyle, Southwestern Life Building, Dallas, Tex.

FOR SALE—OKLAHOMA COUNTY ROYALTIES. H. T. Orcutt, 1106 Colcord Bldg., Oklahoma City, Okla.

ROYALTY BARGAINS in Oklahoma, Lincoln and Pott Counties for sale. American Inv. Co., 201 Elks Bldg., Oklahoma City, Okla.

ROYALTY AND LEASES
Van Zandt County, Texas.
Caldwell and Holland,
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We Handle Oil Leases and Royalties.
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630-31 Security Bldg. 3-7881; L. D. 594
Oklahoma City, Okla.

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Play your money safe—$100, half cash, buys choice lot College Park addition to Oklahoma City. Warranted deed, full royalty under Buttram Petroleum Co. community lease. Write or phone for particulars. George Fisher & Sons, 607-8 Cotton Exchange Bldg., Okla. City, Okla.

WANTED—Oil Royalties, oil and gas production and acreage. Full particulars to F. Martin, 31 Fort Hill Circle, St. George SI. N. Y.

ECTOR COUNTY—4th well 1,500 bbls. Royalty interest $40 to $100, ¼ cash, balance monthly. C. H. C. Anderson. Linz Building, Dallas, Tex.

OIL ROYALTY for sale, seven-eighths Mineral Deed, 82 Sections Brewster County. Price $1.50 acre. Other Royalties, Leases. Box 244, San Angelo, Tex.

VAN ZANDT and East Texas Royalties, Leases under and near major blocks, $2 up. Inquiries invited. Lists. J. M. Ferguson, Box 1326, Fort Worth, Texas.

ROYALTY ACRE GYPSY BARKUS 125-A, 6-8-6, Seminole County; ten Wilcox wells producing 2,126 barrels, settled two wells, deepening one, new sand other drilling. 6,000 feet deepest test in area. Income $100 monthly. Unusual speculative play. R. E. Lowther, Jackson Bldg., Buffalo, N. Y.

COOKE COUNTY, TEXAS, ROYALTIES
One-fourth of owner's one-eighth royalty under 289 acres with well drilling on same. Very low price. All of owner's one-eighth royalty on 160 acres within quarter mile of well now drilling.
W. R. Andrews, Box 7, Gainesville, Texas.

FOR SALE—Royalties in Loving and Winkler Counties, Texas, close to good production. 3252 Girard Ave., South., No. 302. Minneapolis, Minn.

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On structure and in the maior company blocks, in northwestern Oklahoma. Woods, Harper, Major, Woodward and Blaine Counties.
G. D. Mansur
416 Equity Bldg., Oklahoma City, Okla.
Phone 7-2666

ROYALTIES—PRODUCTION

JACK COUNTY ROYALTY—One-half royalty, 1,000 acres North and East Half Jack County. James T. Cumley, Wichita Falls, Texas.

FOR SALE, royalty, Oklahoma City field. Box 653, Kansas City, Mo.

ROYALTIES IN ECTOR, Winkler and Pecos Counties, Texas. J. B. Azbill and Company, Inc., Paul Brown Bldg., St. Louis, Mo.

$150 INVESTED IN MONTANA ROYALTIES has paid $35,000. Free information sent concerning present advantageous offers, producing and ahead of the drill. Bonded broker. A. H. Raymond, Box 1776, Great Falls, Montana.

SEVERAL HUNDRED acres of royalty for sale in eastern part of Oklahoma County, Oklahoma. Advise me where you are interested. Shirley Thompson, Jones, Okla.

WE WANT good oil and gas royalties. Send us full information with reports. U. S. Royalties Corporation, C. A. Johnson Bldg., Denver, Colo.

RICE COUNTY ACREAGE
and close to Royalties for sale. Also interest in well and 3,000 acres. G. W. Moore, Independence, Kansas.

BUY ROYALTY. The royalty that sells for a few dollars today is the high priced production royalty of tomorrow. We have it at all prices. ELMER S. and FOX WOOD, 712 Herskowitz Building, Oklahoma City, Okla. Phone. 7-3514.

BUY DEEDED OIL ROYALTY interest Oklahoma County. 1/640th of Landowner's 1/8th of ALL OIL under 10 acres—$8.00, 40 acres $25.00, 80 acres $50.00. Act quick. Full information. Joe Milam 205 Oil Exchange Building, Oklahoma City, Okla.

WE BUY AND SELL producing royalties, finance drilling propositions. Submit offerings with descriptions. J. A. Harrison. 423 Kennedy Building, Tulsa, Okla.

BEDROCK ROYALTY PRICES ahead of drilling on major company blocks. $6 per square mile. Perpetual deeds and title warranty. Clearly stated and understandable interests. See maps and bulletins. R. R. Fisk, Box 1214-B, Wichita Falls, Texas.

BUY ROYALTY UNDER 600 ACRES OKLAHOMA County located in 4 location under many different leases. Deed to 1/640th of Landowner's ⅛th of all oil under 600 acres $375.00, 2/640th $570.00, 3/640th $1,125.00, 4/640th $1,500.00, limit buy to anyone, 10/64th $3,750.00. Full information write Milam Oil Investments, 204 Oil Exchange Building. Oklahoma City, Oklahoma.

AN EXPERIENCED, DEPENDABLE BROKER specializing Oklahoma City Field royalty offers excellent bargains. Joe P. Crawford, Petroleum Bldg., Oklahoma City, Okla.

GOOD ROYALTY PROPOSITION
We want Eastern representatives to handle good royalty proposition. Wood Petroleum and Royalty Corporation, 712 Herskowitz Building, Oklahoma City, Okla.

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$10 MONTHLY acquires 5 acres pecans, figs, oranges. Cared for. Suburban Orchards, Dept. J. Biloxi, Miss.

FOR SALE in Fee for less than we believe timber on land worth, 5,329 acres in body, 1,250 acres another body, and between near-by oil structures in Concordia Parish, Louisiana. Owner had land "wished on him" and is engaged in other business. $4.50 per acre if taken soon. Address Box 151, Bloomfield, Mo.

(ADDITIONAL CLASSIFIED WANTS ON NEXT PAGE)

Inquiries for Gasoline in Chicago Area

Unusually Favorable Weather Causes Good Consumption Over Week End. Almost Summer Volume on Hard Roads

By J. B. Waldo

CHICAGO, Feb. 24.—There were quite a number of inquiries for gasoline in the market this morning largely as the result of the very favorable week end. Local distributors report an excellent business on both Saturday and Sunday auto travel the latter day showing almost an average summer volume on the hard roads. The dirt roads are still too soft for travel. As the weather continues warm and generally bright a better gasoline business is hoped for in the spot market later in the week. Prices showed little change. Major refiners were still naming 6½ cents as their spot price but U. S. Motor gasoline was freely offered both for resale and to distributors at 5⅝ cents Group 3 and some of the largest jobbers stated they could buy for 30 days delivery at 5½ cents. In some cases these prices were named by local refiners. There is also a quantity of gasoline remaining on February purchases which has to be ordered out before the close of this week, some of which can be moved profitably at 5½ cents. The price situation is still under the influence of these stocks. The volume of business in the spot market is not sufficiently large to absorb the gasoline that is being pressed for sale. Refiners state that their contract customers are ordering easily and for the full amount of the contracts.

Kerosene Buying

Kerosene has been rather freely bought but many of the purchases have been by marketers who are expecting a real demand to develop during the next 30 days and the movement was not large on Monday.

The furnace oil markets were very quiet and the chief activity of the tank car dealers was to induce their trade to take in the material which they had coming on previous purchases. Prices ruled easy in tone. There was a little activity in industrial fuel oils, the monthly buyers being interested but prices were not well held and many claims were made by those in the market for heavy fuel oil of low prices quoted. Many of these are quotations made on material which is often not full specification but is usable fuel oil.

Ordering for Needs Only

During all of last week, the Chicago market seemed to be trying to make up its mind regarding the price situation and with little success. Distributors with few exceptions are simply ordering for present needs, in many cases simply taking in their contract quantities and accumulating a little gasoline from these deliveries. Refinery offices state contracts are being taken out in good shape, same say 100 per cent, but jobbers tell a different story, one large distributor stating last week that he had not ordered out a single car on his February contract and there were several others who admitted they were behind on shipping instructions, but had more gasoline than needed.

Spot buying naturally was light. Early in the week, following the decline in the tank wagon market over this territory, there were a good many inquiries and a little buying in the spot market but as the week passed few inquiries changed to orders and the market became dull with only occasional reports from some favored seller of good business on some day of the week. Most of these reports were for single days only and finally the feeling grew that one good day was all that could be expected by the sales office and many did not have that single favorable day last week to report. Most of these orders were for single cars and a list of one car orders would be broken by an occasional order for two cars, seldom for more. One of the ideas that the oil jobbers have in regard to the present situation is that prices for gasoline will not advance this season as they have during the past two years and that they would gain little by stocking up right now. As one said, "We may be wrong, we have been fooled before, and we may change our minds a little later but right now we cannot see any advantage in buying for future needs."

Price Situation

There is quite a lot of gasoline owned in this market which was sold by refinery to marketers and others which the buyers for resale have been unable to move owing to the light demand during the past two months. Some of it has been paid for, or it is so stated, and the buyers have until June to take it out of the refiner's tanks. Other lots will have to be closed out this month or the balance of the order will be cancelled. Some of the sellers in this market own gasoline bought for February delivery at 5⅜ cents which must be sold to jobbers within two weeks. Early last week U. S. Motor gasoline was sold at 5⅞ and 6 cents but owing to the situation here with regard to the unsold portion of previous purchases, the market did not hold at these prices but closed the week at 5¾ cents with about as much gasoline selling at one-eighth of a cent less as was being sold at a higher price. The major refiners are still holding to their 6½-cent price for U. S. Motor gasoline but are not selling enough to make a market. One large refinery organization stated its spot sales averaged a car a day and most of these were because they could give prompt shipment from a nearby refinery.

As to the higher tests refiners report there has been considerable export buying of the 400 and the 375 endpoint from the Texas refineries at very good prices. One statement is that the buyers were paying the prices named with the agreement that when their present purchases were all shipped by the end of 60 days and they were again in the market for more gasoline they were to have the same prices as they were paying today. Very little gasoline has been offered for immediate or fairly prompt delivery out of North Texas, refiners there having sold up pretty closely. For March delivery Oklahoma refiners have in a few instances offered to accept resale orders at 5⅞ cents and in some cases at 5¾ cents for U. S. Motor gasoline. However, in most cases the marketers are not ordering in advance of their actual sales. The demand for the antiknock motor fuels continues good.

Kerosene

There is a little better demand for kerosene and the market is a little higher and firm but these changes are rather in anticipation of a coming increase in consumption than any great improvement in immediate business. Some jobbers who have storage have bought a little kerosene, but at present there is no real use being made of the tractors. So little kerosene is run by the average refiner that the statement by some refiners that they are sold up or sold ahead means little as to volume. One refiner who has rather specialized on kerosene reports a good demand at his price of 4⅛ cents and another who has a reputation for kerosene states his plant is sold up to the middle of March. One of the major integrated companies is in the market for kerosene for its own needs, which is not an unusual condition with this company. The outlook is for a stronger market after the first part of March. Some refiners and distributors are recommending the use of distillate as tractor fuel the sales price being usually sufficiently below kerosene to make the offer attractive to the owner of the tractor and yet leave a fair margin for the distributor.

Furnace Oils

The demand for furnace oils has been totally demoralized by the spring-like weather of the past four weeks. Distillates which have no other use in the oil industry except as furnace fuel, unless it be as tractor fuel, have weakened until they are actually a drug on this market. Refiners have offered good material at price for resale which permit of its purchase by the distributor as low as 3 cents and it would be difficult to secure a better price than 3¼ cents today for any kind of distillate. There is practically no demand for distillates from distributors and the difficulty is to induce them to take in even the cars they have ordered. Should March prove a colder month there might be some demand but supplies are too ample to admit of much hope of better prices. Zero gas oils are hardly as strong as they have been to date but holding fairly well, compared with distillate. There is practically no real straw gas oil to be had and prices are nominal. The common dark zero oil has been selling as low as 2⅞ cents and light or amber gas oil, zero of course, at 3 cents. The high gravity zero fuel oils are in about the same position as gas oils.

Gas Oil

Straightrun gas oil is being furnished on contracts but even the companies with contracts are slow to take out more than their minimum amounts and some not that. The demand from spot buyers is uneven and not large as a whole. The market hangs along at 2½ cents with some hope the demand for gasoline may be of such volume as to make a demand for straightrun gas oil as cracking fuel.

Fuel Oils

The great bulk of the demand for heavy industrial fuel oil is being supplied on contracts with some time to run and there are no important orders. In the absence of an active spot demand and with the end of the demand for oil for heating in sight, the market has ruled easy and prices are lower for the zero oils which are yet the only ones wanted by users. Refiners are asking buyers to

(Continued on Page 144)

CLASSIFIED WANTS

(Continued from Preceding Page)

INCORPORATIONS

CHARTERS—Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE incorporator. Charters fees small, forms. Charles G. Guyer, 901 Market St., Wilmington, Del.

WANTED

DRILLING CONTRACT wanted for an interest in 10,000 acres on definite structure determined by geologist of wide experience. Leroy Taylor, Box 1096, Seminole, Okla.

WANT DRILLING CONTRACT Culberson, Hudspeth, El Paso Counties. Palm Milby, P. O. Box 247, Clint, Texas.

CONTRACTOR WITH CABLE TOOLS in Southwest Texas desires contract not less than 1,200 feet. May take small part in acreage. Write Box E-115, The Oil and Gas Journal, Tulsa, Okla.

WANTED — A RELIABLE COMPANY or oil operator to put down a deep test well on structure in Wilson County, Texas. Max Huerlimann, Route 1, Box 45, Nixon, Texas.

WANT 20 to 30 barrels settled shallow production. Depth 300 to 600 feet. Prefer around San Antonio or Fort Worth, Texas.
L. W. Harriss,
Autrey Oil Co.,
Haughton, La.

PATENT ATTORNEYS

LOYAL J. MILLER
Registered Patent Attorney.
626 Insurance Building,
Oklahoma City, Okla. Phone 3-1748

REGISTERED PATENT ATTORNEYS
United States and Canada.
Before disclosing your invention to anyone, send for blank form, Evidence of Conception.
Bulletin "How to Establish Your Rights" and complete information free.
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INVENTORS who derive largest profits know and heed certain simple but vital facts before applying for patents. Our book, Patent-Sense, gives those facts. Free. Write Lacey and Lacey, 577 F. Street, Washington, D. C. Established 1869.

ANNOUNCEMENT

C. E. LOEB SAVOY
Attorney-At-Law
1116 American Bank Building
NEW ORLEANS, LOUISIANA
announces the opening of a department specializing in the examination of Louisiana abstracts of title for oil operators, giving special attention to matters in escrow.

MONEY RAISING

CAPITAL — An experienced, dependable broker will aid in financing propositions of merit. Amster Leonard, East Orange, N. J.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 2443 N. W. 12th, Oklahoma City.

FINANCE YOUR OWN project with shares bonded. Quickest, most satisfactory known method of raising capital. Information free. Bankers Interstate Security. Electric Bldg., Denver, Colo.

BULLETIN, containing information of priceless value to responsible parties seeking capital, yours upon request. Free analysis and advice cheerfully given. Moderate rates. Prompt. Service. Morris, Financing Specialist, 3608 Warren St., Philadelphia, Penna.

INQUIRIES SOLICITED FROM CORPORATION interested in raising capital through marketing of corporate securities.
THE BROOKWORTH CO., INC.,
110 East 42nd St., New York City.

FOR SALE—MAPS

NEW MAP OF
MID-CONTINENT OIL FIELDS
Suitable for pocket or desk top, shows counties and producing areas in Oklahoma, Kansas, Texas, Arkansas, Louisiana and Eastern New Mexico. Postpaid for $1.
KELLY MAP CO.
P. O. Box 1773, Tulsa, Okla.

OIL DEVELOPMENT maps, any county in Oklahoma and west Texas. 75c each. State, county and district maps showing oil development. Lindsay Map Co., Franklin Bldg., Oklahoma City, Okla

TOWNSHIP PLATS, Letterheads, Envelopes. Write for samples. R. D. Elliott. 5 N. First St., St. Louis, Mo.

ZINGERY OIL MAP CO.
Makers of famous Zingery abstract maps.
813 Throckmorton Ft. Worth, Texas.

Unsettled Situation Weakens Market

Eastern Marketers See Need of Slackening Refinery Operations. Warmer Weather Stimulates Gasoline Movement

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, Feb. 24.—East Coast refined products markets are considerably unsettled, and the market undertone consequently continues weak. The quarter-cent reduction in the posted price for U. S. motor gasoline at Bayonne refineries, announced February 18, has not adjusted the open market to prevailing conditions, and price cutting is still more or less general. Unless market conditions should show radical improvement within the next few weeks, the market shows signs of settling around 8 cents per gallon at principal East Coast refineries. A decline to this point, it is believed, would probably necessitate a general rearrangement of tank wagon and service station price schedules. Moreover, it is a question as to whether a general cut to the 8-cent level would thoroughly stabilize the market. California evidently has considerable quantities of gasoline which must be marketed, and an 8-cent market here would doubtless result in a drop in the laid-down price of California motor fuel at East Coast points to 7¾ cents per gallon, or under.

Weakness in the crude oil market, with the possibility of further cuts in Mid-Continent and eastern fields, has been a factor contributing to the general feeling of uncertainty in eastern refinery markets. Sentiment here is inclined to the belief that the pressing need of the industry is a marked curtailment of inventories of refined products and this must necessarily be accompanied by some slackening in refinery operations.

Warmer weather has stimulated gasoline movement somewhat this week, but has been reflected by a falling-off in the refinery movement of kerosene, furnace oil and gas oil. Cylinder stocks are holding their own thus far, but the market tone is weak, and slight reductions would not come as a surprise.

Tank Car Gasoline

The reduction of a quarter-cent to 8½ cents per gallon for U. S. Motor at refineries, inaugurated by Standard of New Jersey on February 18, has been met by all other factors here. While demand picked up considerably during the second half of the week under the influence of warm weather, the market was still soft, and far from firm at the revised price level. While most sellers were nominally quoting 8½ cents, it was by no means difficult to buy at 8¼ cents and 8 cents per gallon could be done in some directions.

The barge market is extremely soft, and, although 8 cents per gallon is the nominal quotation for spot shipments, it is reported that this price can be shaded by an eighth to a quarter-cent per gallon.

California gasoline is still available in a large way at 8 cents per gallon, laid down in New York, and it is indicated that stocks can be had under this figure in some instances. Owing to the uncertain outlook in Atlantic Coast markets, however, there is little buying interest shown in California gasoline for shipment East, aside from the regular movements of motor fuel by the large integrated companies with their own outlets for the gasoline.

Recent reductions in crude oil prices, and rumors of pending further slashes in posted prices have imparted a very unsettled tone to the eastern gasoline markets. Jobbers are operating in a hand-to-mouth way, and are not carrying much stock on hand. Interest in forward deliveries is at a standstill, and some companies have indicated their willingness to protect their buyers on price declines in an effort to keep the fuel moving.

Seasonal curtailment in consumption in many sections of the East has run far in excess of anticipations, in numerous instances, owing to the exceptionally severe winter which we have gone through this year. A contributing factor to the weakness thus engendered has been the falling-off in export volume on gasoline.

Tank Wagon Gasoline

No further price changes in tank wagon markets have developed this week. The cut in the tank car market, however, has imparted an easy feeling to the tank wagon situation, and present prices are far from firm. The general feeling seems to be, however, that a further decline of at least a half-cent per gallon will be necessary at East Coast terminals before the situation will warrant any action in the tank wagon market. This, of course, does not take into consideration any reductions which may be forced as a result of competitive conditions.

Interests in New York State are considerably concerned over current legislation for an increase in the gasoline sales tax from 2 to 3 cents per gallon, and it is expected that oil companies, in common with automobile associations, will voice a strong protest against the increase.

Territorial lines in tank wagon markets are going by the board in the current race for business in the East, and numerous brands hitherto unknown in the local market are now making their appearance. Richfield is entering the New York City market in a large way for the first time, after having completed the organization of their marketing forces in other sections of the East. Shell is expanding steadily in the local market, and Continental stations are beginning to make their appearance here. Pan American is expected to make a strong bid for dealer outlets this spring and summer, to take care of the growing gasoline production of their new Aruba refinery. Sinclair, Texas, Standard of New York, Beacon, Tide Water, Warner-Quinlan, Gulf, Atlantic and others are also active in the retail marketing field here.

Kerosene

Although milder weather has materially cut into the jobbing demand for kerosene, leading refiners continue to hold the tank car market for water white at 7¾ cents per gallon, refinery, with a moderate movement reported. Refinery holdings of kerosene are not excessive, and refiners look for a firm market well into the spring season. Increasing competition from Pennsylvania refiners is looked for in some sections of the East due to the recent cuts in crude, and this may necessitate a revision in the tank car market in a few areas to meet competition.

Tank wagon distribution of kerosene has been fairly well maintained during the week and quotations remain unchanged at all points in New York and New England territory. Marketers report that service station sales of kerosene are running considerably in excess of those a year ago at this time, this type of distribution having been materially broadened during the current season.

Export movement of cased kerosene is reported holding up well, with the market in firm position.

Lubs

Continued quiet in cylinder stocks prevailed during the week, and, although prices showed no changes, the undertone was definitely easier. Reductions in Eastern crude oil prices have given buyers the impression that downward revisions in cylinder oil quotations are in the offing, and pending such reductions buyers are holding off the market. Refiners are still making a determined effort to hold the market at current levels, taking the position that recent cuts in cylinder oil prices have fully discounted the lower crude market, and it is still a waiting battle. Domestic jobbers have been out of the market to a great extent since the first of the month, and it is merely a question of time before they will be forced to come in and cover in a large way. The export trade has also been operating hand-to-mouth during this period, with sellers looking for a revival in the export trade likewise in the near future.

Red and pale oils have been moving in steady volume during the week and the market held firm. Movement slowed down somewhat at the week-end, the Washington's Birthday holiday tending to slow down industrial operations somewhat. Curtailed consumption of spindle oil was indicated by the report of the Census Bureau showing that of the 34,630,866 cotton spindles in place January 31, only 29,198,134 were operated at some time during the month, as compared with 30,753,168 for the corresponding month in 1929.

Refiners have reported an increase in the demand for branded package lub oils this week, distributors beginning to stock in a large way for the spring trade.

Paraffin Wax

The market was without important change this week. Demand for fully refined grades picked up somewhat, and, while the market tone was stiffer, buying did not develop to the point where any price advances materialized. Export inquiry had also picked up a little.

Refiners appear to have liquidated their burdensome surplus holdings of paraffin, and buyers were finding it more difficult to secure concessions on prompt shipment wax. On deliveries during the second quarter of the year refiners were definitely stronger in their price views, notwithstanding the lower crude oil market.

Fuel Oil

Routine demand for bunker oil was keeping the market in steady position, with refiners quoting $1.05 per barrel, bulk, at refineries. A good contract movement was reported during the week.

Industrial consumption of East Coast fuel oil is expected to be stimulated shortly by the opening of traffic on the Great Lakes. According to reports in well-informed circles, a number of new cargo vessels will go into the Lake service during the summer months. These vessels will be used mainly for the transportation of manufactured products to the seaboard, and it is expected that fuel oil will be carried, largely as ballast, on the return trip. This development, it is believed, will aid materially in bolstering the position of the fuel oil market in the East.

Another constructive development in the fuel oil situation is the curtailment of exports, and the smaller output of bunker oil at East Coast refineries, due to the increasing refining activities in the Caribbean area. Considerable quantities of Venezuelan oil, formerly shipped here and topped, are now being refined at plants adjacent to the South American fields. This, of course, will affect the gasoline market unfavorably, but reacts to the advantage of the domestic fuel oil market.

Gas Oil

Refiners are still maintaining the posted price at 5¼ cents per barrel, but this figure is largely nominal and the bulk of the business is going through at 5 cents per gallon and less at refineries.

Contract withdrawals by the large gas manufacturing companies are fairly well maintained, but movement has eased off slightly at the week-end. During the early part of the week, with the New York area experiencing record cold weather, consumption showed a sharp increase.

Lower grades of gas oil are still moving in fair volume on furnace oil contracts, at around 4½ to 4¾ cents per gallon. With the season nearing a close, receipts of California gas oil have dropped off preceptibly, and it is reported that season contracts for the Pacific Coast product are expiring, with little buying interest shown in the open market.

Diesel Oil

Refiners report a well-sustained movement of Diesel oil this week, with the market holding steady at $2 per barrel, in bulk, f.o.b. refineries. Marine consumption has been well maintained during the week with contract shipments accounting for the bulk of the volume in this direction.

A number of large Diesel-electric vessels are now operating in the West Indies cruise business, and this development has made for considerable increase in contract withdrawals in the local market. Refiners believe that Diesel oil sales will show a steady and substantial increase over the year.

Petrolatum

Export inquiry for petrolatum showed some improvement during the week with the market holding steady on most grades. Lily white was offering at 6½ cents per pound, off a half-cent from previous quotations, but with this exception refiners were firm in their price views.

Recent reductions in eastern crude oil prices, it is felt, will not seriously affect the petrolatum market, although fractional cuts may develop in instances where an unusually "close" price is necessary to meet competition.

Domestic consumers have been in the market for petrolatum in a fairly substantial way during the week. A number of buyers are covered on their requirements for the first quarter of the year, and these are expected to come in for their second quarter's supplies within the next few weeks.

Export Markets

Unconfirmed reports here indicate that a large volume of gasoline business has been booked at the Gulf this week through independent sources. The quantity, according to reports, involves five or six large cargoes, purchased in the field by London interests at prices a half to three-quarters of a cent under posted export prices. This motor fuel, the report has it, will be moved into export channels through New Orleans during the remainder of the current month and throughout March.

Rumors of a pending reduction in the export association price basis have also been heard in some quarters, but no official comment regarding any revision has been heard. A change in the export posted quotation requires the unanimous consent of all companies affiliated with the export group. Owing to the belief held in some quarters that an early gain in European buying of American gasoline may be looked for, it is rather dubious if 100 per cent consent to a lowering of posted prices could be obtained.

The charter market continues extremely strong with vessels rather scarce. Some of the large integrated companies which had tied up considerable tonnage

have now completed deliveries on their committments, and are releasing tankers. French and other European buyers are reported chartering these bottoms as fast as they are available, however, and domestic operators are being forced to bid high prices for tankers for the transatlantic trade. This situation is naturally having its effect in slowing down the movement of California gasoline to East Coast markets for the account of independent operators.

Export volume of the minor products has fallen away a little during the current week, although operators in most instances are optimistic regarding an early revival in demand.

Petroleum Exports

The following table shows principal exports of refined petroleum products from New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	Feb. 15	Feb. 8	Feb. 1
Gasoline	450,000	171,000	468,000
Naphtha	710,000	625,000	975,000
Kerosene	6,000	5,000	410,000
Fuel oil	8,000	8,000	30,000
Lubricating oil	2,615,000	1,305,000	2,395,000
Petroleum, refined	855,000	1,575,000	831,000
	Pounds		
Petrolatum	30,000	46,000	.....
Paraffin wax	366,000	956,000	2,660,000
Refined	459,000	970,000	831,000
Scale	117,000	520,000	264,000
Lubricating grease	660,000	945,000	765,000

Recent reductions in eastern crude oil prices have evidently led to the belief among export operators that cuts in refined products prices will develop as a result of the lower crude market. Buying for prompt and nearby shipment this week has been of extremely limited volume, and the markets have softened in consequence. Weakness in gasoline markets at the Gulf, with reported price shading at that point and in California export markets, has tended to switch export buying attention from the East Coast area for the time being. Notwithstanding current quiet in the export markets, however, many traders are of the opinion that Europe will be in the market for refined products in substantial quantities within the next few months, and look for an early revival of buying interest in the export market.

Imports

Imports of crude and refined oils at the principal United States ports for the week ended February 15 totaled 1,788,000 bbls., a daily average of 255,429 bbls., compared with 1,378,000 bbls., a daily average of 196,857 bbls. for the previous week, and a daily average of 245,429 bbls. for the four weeks ended February 15. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
Baltimore	247,000
Boston	65,000
New York	1,025,000
Philadelphia	187,000
Others	173,000
Total	1,697,000
Daily average	242,429
At Gulf Coast ports—	
New Orleans and Baton Rouge	51,000
Tampa	40,000
Total	91,000
Daily average	13,000
At all United States ports—	
Total	1,788,000
Daily average	255,429
Daily average four weeks	245,429

California Oil Receipts

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended February 15 totaled 612,000 bbls., a daily average of 87,429 bbls., compared with 479,000 bbls., a daily average of 68,429 bbls. for the previous week, and a daily average of 80,893 bbls. for the four weeks ended February 15. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports—	
Baltimore	80,000
New York	153,000
Philadelphia	284,000
Others	95,000
Total	612,000
Daily average	87,429
At Gulf Coast ports—	
All ports	.....
At Atlantic and Gulf Coast ports—	
Total	612,000
Daily average	87,429
Daily average four weeks	80,893

All of the California oil receipts for the week consisted of gasoline.

There was only one cargo of California refined products shipped for the East Coast during the week, totaling 75,200 bbls. of gasoline on the Baldhill (Richfield) for New York.

A cargo of 72,000 bbls. of gasoline on the New Jersey (The Texas Company) cleared during the week for Houston.

INQUIRIES FOR GASOLINE IN THE CHICAGO AREA

(Continued from Page 142)

place orders and offering concessions in prices that indicate a certain amount of eagerness for business. Prices have been decreased generally 5 cents a barrel for the average grades of zero oil. In some cases the decline in the refinery prices has been much greater as in the case of one Oklahoma refiner who reduced his price for a high grade 24-26 fuel oil from 90 to 75 cents a barrel to dealers. There are numerous reports of this or that refiner unloading considerable quantities at lower prices but they are not substantiated by actual facts although there may be some truth in them. Here and there sales have been made at what were low prices and any refiner with a stock of fuel oil, if he could have foreseen such a month as we have had this February, would have been wise to reduce his holdings even at some lower prices. The general opinion is that if nothing happens to increase the demand (and what can happen?), there will be a real decline in the market as soon as the March buying is done and possibly it will not wait for that buying.

Tank Wagon

Little is expected from this last week in what the oil industry is accustomed to consider the worst month in the year. With the coming of March, more activity is anticipated and a larger demand by the end of the month for gasoline at least. while kerosene will have its play for the season. There is no present prospect of a change in the tank wagon over the territory. The recent reduction has cut the margins and may have a steadying influence on the situation as to station prices. The question of what is a commercial account and what can be done about them and not run against some provision of the code, is rather a problem right now. Here is one suggestion that has been tried. A company operating a line of buses and trunks, carrying both freight and passengers, buys its gasoline in tank car lots. Having no bulk storage or service stations, it has arranged with distributors at convenient points along its line to take in and service its vehicles. For this service it pays the distributor 3 cents a gallon. With the present spot market for U. S. Motor gasoline, the gasoline would cost this company in Chicago 12 cents against a tank wagon price of 14 cents and a service station price of 15 cents. In such an arrangement there are no cuts in prices. The refinery gets its price, the freight is paid, the station has sold not gasoline but storage and delivery service, and the buyer has saved a couple of cents a gallon, which would be quite an item with a bus company burning a gallon every 5 miles.

There is a good deal of price cutting going on but less since the reduction in the tank wagon, for many price cutters have not followed the prices down but are holding their old prices, which were 2 cents below service station price but are today in line with the normal market. Some expect to keep in line even if the price is advanced. The management of one stated his company would hold the full normal price hereafter and spend the extra money received as the result of so doing in advertising to push the sale of its brands of gasoline and other material.

VENEZUELAN PRODUCTION

NEW YORK, Feb. 22.—The Colon Development Co., Ltd., Venezuelan operating subsidiary of the Colon Oil Corp., reports for the week ended February 14 a total of 90,000 bbls. of crude oil from 14 wells. This compared with 100,950 bbls. produced from the same number of wells in the previous week.

PROGRAM PLANNED FOR LOS ANGELES SHOW INDICATES INTERESTING WEEK

LOS ANGELES, Calif., Feb. 24.—Although the program for the Oil Engineering and Equipment Exposition to be held in Los Angeles, March 16 to 23, has not been completed, a week of meetings that will hold the attention of field men is assured.

The doors of the exposition will open at noon on Sunday, March 16, and the formal opening will take place at 10 o'clock Monday forenoon. Governor C. C. Young of California will take part in the opening ceremonies if his official duties will permit, and executives of leading state and city business organizations have accepted invitations to support him on the platform.

Details of the program are being worked out by the program committee, which includes Wendell Jones, Petroleum Equipment Co., chairman; W. H. Laury, Universal Rod & Equipment Co.; Frank Mason, Shaffer Tool Works; Harry Morgan, Blackor Co.; R. R. Robinson, consulting engineer; L. P. Stockman, The Oil and Gas Journal; and H. W. Westsmith, publicity director.

Engineering Organizations to Meet

In addition to the two-day convention of the California district of the American Petroleum Institute Division of Development and Production Engineering on March 20 and 21, technical sessions will be held by national engineering organizations. A program of papers dealing with the application of heat treating methods to oil field tools is planned by members of the local chapter of the American Society for Steel Treating, in co-operation with the American Welding Society.

Members of the American Institute of Mining and Metallurgical Engineers probably will join with the American Society of Civil Engineers in one or more technical sessions, with the assistance of the Society of Automotive Engineers.

The Purchasing Agents Association of Los Angeles, whose president is W. H. Jackson, of the Axelson Manufacturing Co., is expected to hold a meeting on one of the open days.

To Demonstrate Safety Work

Safety engineers of leading oil companies have been asked to co-operate with the National Safety Council and the California State Industrial Accident Commission in meetings to supplement the work that will be done at the exposition by the United States Bureau of Mines. S. H. Ash, district engineer of the bureau, with headquarters in Berkeley, Calif., will be in charge of the exhibit. He will be assisted by Emory Smith, foreman of the rescue motor truck, which will be brought to the exposition grounds.

Demonstrations of resuscitation work or persons asphyxiated by drowning, electric shock, and noxious vapors will be given by bureau engineers. Crews of men will demonstrate the value of improved types of oxygen-breathing apparatus, all-service gas masks, and other safety equipment. Lessons in first-aid training will be given.

Production engineers of the Petroleum Division of the United States Bureau of Mines will take an important part in the exposition. Material that formed part of the valuable exhibit at the Tulsa Exposition is being shipped to Los Angeles, where it will be supplemented by special exhibit prepared under the direction of C. P. Bowie, supervising engineer of the bureau.

FORM MIDDLE STATES PETROLEUM CORPORATION

NEW YORK, Feb. 24.—Joseph Glass, former receiver of Middle States Oil Co., has been elected president of Middle States Petroleum Corp., the successor company.

Norris T. Gilbert of Tulsa has been elected first vice president and general

Norris T. Gilbert

manager, in charge of field operations. He was formerly one of the ancillary-receivers.

Other officers are Thaddeus G. Benton, secretary and treasurer, Conrad E. Cooper, general attorney, and Carl E. Lind, comptroller. Directors include Charles D. Barney, Matthew C. Brush, Frank B. Cahn, Henry S. Fleming, Norris T. Gilbert, Joseph Glass, Leavitt J. Hunt, James E. Sague, and Henry F. Whitney.

Voting trustees for all the stock of the new company comprise Messrs. Brush, Cahn, Fleming, Glass, and Sague, with Brush and Glass independent voting trustees. Securities of the new company are being mailed to depositors under the reorganization plan.

MEXICAN CRUDE PRODUCTION

NEW YORK, Feb. 22.—Mexican crude oil production for January amounted to 3,718,667 bbls., compared with 3,514,909 bbls., in January, 1929.

Oil production taxes for February, as announced by the Mexican Ministry of Industry, Commerce and Labor, remained unchanged from January levels at 13.25 cents a barrel (United States currency) for light crude, 7.58 cents for heavy crude, and 11.66 cents for fuel oil. Combined production and export taxes are 21.20 cents for light crude, 12.51 cents for heavy crude and 18.02 cents a barrel for fuel oil.

GROSS CRUDE STOCK CHANGES

Pipe line and tank farm gross domestic oil stocks east of the Rocky Mountains increased 1,939,000 bbls. in the month of January, according to returns compiled by the American Petroleum Institute from reports made to it by representative companies. The net change shown by the reporting companies accounts for the increases and decreases in general crude oil stocks, including crude oil in transit, but not producers' stocks at the wells.

CALGARY WANTS GEOLOGISTS

CHATHAM, Ontario, February 22.—An invitation will be extended to the American Association of Petroleum Geologists, at its forthcoming convention at New Orleans, to hold its fall convention at Calgary. The Calgary invitation is sponsored by the Alberta Association of Petroleum Geologists and the Probus Club, plans being mooted for a four-day convention in September with visits to the Turner Valley Field and to Banff.

Natural Gasoline Manufacture

Natural Gasolines Gain Percentagely On Other Products

Natural gasoline is more than holding its own as a source of motor fuel in United States according to a comparison which is based on Bureau of Mines reports covering the years 1929, 1928 and 1927. The latest report shows that in 1929 the natural gasoline manufacturer furnished 11.8 per cent of the total gasoline made available by the oil industry in United States. This compares with 11 per cent in 1928 and 10.5 per cent in 1927.

The accompanying table shows the production of straightrun gasoline, cracked gasoline and natural gasoline for the three yearly periods with percentages for each product. The method of making this comparison varies from the usual practice. When gauging the importance of natural gasoline in the motor fuel world it is customary to consider only that part of the output which is blended at refineries. This method fails to take into consideration the natural gasoline which is blended by jobbers or is sold direct as a motor fuel. For instance approximately 45,000,000 bbls. of natural gasoline were blended at refineries in 1929 but the actual production of the natural gasoline plants totaled 52,271,000 bbls. The difference of approximately 7,000,000 bbls. is the quantity consumed outside refineries.

The data for the three years show that fuel oil and gas oil, the charging stock of the cracking units at refineries and the casinghead gas from which natural gasoline is extracted, percentagely are increasing faster than crude oil as raw materials in the manufacture of motor fuels. In 1929 the natural gasoline production increased almost 25 per cent, cracked gasoline 17.5 per cent while straightrun gasoline which is skimmed from crude oil and which formerly was the only source of motor fuel increased only 11.5 per cent.

The gain in cracked gasoline output reflects the increased number of cracking installations at refineries and the larger yields secured from the charging stock. The same situation is found in natural gasoline manufacture. Plants are now quickly installed in the new fields as they are brought in and compared to a few years ago very little casinghead gas is wasted.

Due to the improvements in design, the gasoline yields from casinghead gas are larger. A substantial quantity of natural gasoline is now being obtained from natural gas or lean casinghead gas which a few years ago would not have been considered for gasoline extraction.

Both cracked and natural gasoline are superior motor fuels and for that reason the refiners in most cases aim to secure the maximum yield of these products.

The following table shows the production of the three types of gasoline for 1929, 1928 and 1927:

Gasoline Production
(Thousands of barrels)

		Pct.
1929—		
Straightrun gasoline	245,019	55.5
Cracked gasoline	143,759	32.6
Natural gasoline	52,271	11.8
Total	441,049	100.0
1928—		
Straightrun gasoline	219,439	57.1
Cracked gasoline	122,381	31.8
Natural gasoline	42,326	11.0
Total	384,146	100.0
1927—		
Straightrun gasoline	229,209	62.1
Cracked gasoline	101,226	27.4
Natural gasoline	38,736	10.5
Total	369,171	100.0

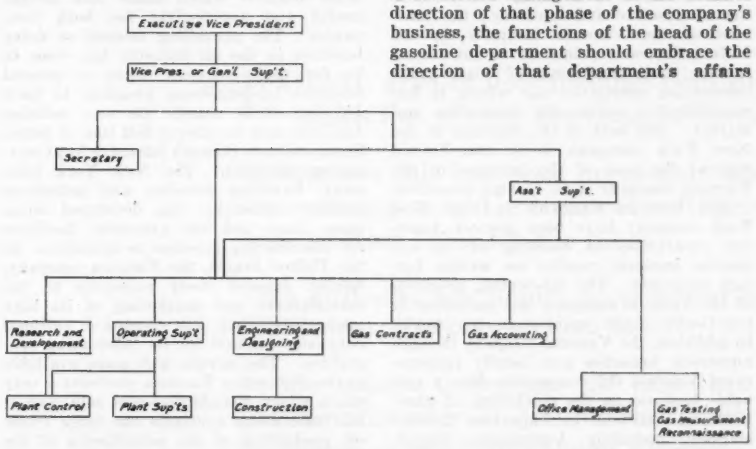
Construction and Operation

Departmental Organization

The processing of natural or casinghead gas for natural gasoline is today a specialty. The ownership of natural gasoline plants presupposes some sort of an organization to manage those plants. Whether the gasoline department is an integrated oil company falls under the general supervision of the refining or production division, or reports directly to the management, there is nevertheless an internal management upon which rests the immediate responsibility of operating that division or department.

At the head of this department is the vice president or general superintendent, to whom all subordinates in the department report, and with whom other department heads contact in matters of mutual interest. The organization (chart) represents the structure of an ideal working unit.

First of a series of articles explaining the inner workings of a natural gasoline organization. The series were prepared by a manufacturer thoroughly familiar with all phases of construction and operation.



Chart

Whether the company operates few or many plants this organization scheme is followed in the main. While in the small organization several of the divisions may be manned by one person, in the large organization there may be more than one for each category. It does not matter that in some companies gas contracts are handled by the legal department or by a separate division reporting to the executive vice president, or that gas accounting is accomplished by a division within the general accounting department. It is most likely that this detail of organization is one of chance and not at all by design. It may even be that some personal element at one time or another estopped the natural evolution of the divisions as charted. Yet the functions of the divisions remain substantially the same.

Since the justification of a department is to relieve management of the detailed direction of that phase of the company's business, the functions of the head of the gasoline department should embrace the direction of that department's affairs within and without the company, in line with established policies of the company. In a broad and general way it may be stated that the department is expected to operate the plants, design and build new plants, investigate construction materials, reconnoiter new situations for recommendation to the management; buy and sell gas, and account for same; engage in research to improve processes and products, and to develop new products or new uses for established products; receive orders from the sales department and accomplish shipment of products, and transmittal or records and documents to coordinate departments; engage and develop personnel and contact with trade and trade organizations.

While there generally are special staffs for safety and welfare direction, a great deal of effort in this direction must be given from within the department. It is almost axiomatic that a group of employes with a good accident record and a healthy morale is a hard-hitting, effective organization.

Flexibility

A "chart" organization, with a man for every job, is not necessarily a good organization. It is not to be taken for granted that that alone is an assurance of success. It is quite necessary that every pivot man on the staff be qualified for that position, and it is imperative that the whole organization keep abreast of the rapidly changing conditions in the oil industry in general and in the natural gasoline industry in particular. No other branch of the oil industry has undergone the evolutionary, yet fundamental, changes experienced by the natural gasoline division in the last decade. From his lookout the superintendent must watch this ever changing picture and apply it to his company's situation. He must check performance in the several fields of effort, knit them into an operating whole, and be able to present a consolidated picture to the management. Just what occupies the general superintendent's time will be shown in a succeeding article.

Who's Who
IN NATURAL GASOLINE MANUFACTURE

FORREST E. GILMORE CO.

The operations of the Forrest E. Gilmore Co. are devoted exclusively to the construction and operation of natural gasoline plants. The company has general offices at Portland, Ore., but its main operating office is located in the Wright Building at Tulsa.

The company was organized in 1925 to engage in the manufacture and sale of natural gasoline. The company has built and acquired properties so that it now has 12 plants with a daily capacity of 115,500 gallons daily. Ten of the plants are located in Oklahoma and two in Texas.

It has been the aim of the company to tie in its operations to those of the crude oil producers, particularly the smaller operators who do not maintain natural gasoline departments and do not operate plants. In the Greater Seminole area of Oklahoma, and other fields the company has purchased the gas from producers, building plants in line with the quantity of gas available. In a few instances, the natural gasoline plant operation has been combined with the use of the gas lift in flowing wells. In some cases an agreement has been worked out in which the Gilmore operators have furnished the gas at the pressure necessary to operate the wells extracting the gasoline while the gas is being recycled. Last year the company materially increased the capacity of its plants by acquiring the natural gasoline properties of the Cushing Refining & Gasoline Co.

In sales the company has pursued a policy of contracting the output and for that reason does not maintain a tank car sales department. R. M. McCalley is general superintendent of the plants.

Following is a list of the company's plants and daily capacities:

TEXAS

Location—	Daily cap. gallons
Section 134, Block A, E of B, Palo Pinto County	1,500
Section 163, Block 3, I.&G.N.R.R. Sur., Gray County	20,000
OKLAHOMA	
Section 1-17-10, Creek County	5,500
Section 23-8-6, Seminole County	7,500
Section 35-8-6, Seminole County	5,000
Section 30-11-11, Okfuskee County	8,000
Section 17-5-8, Pontotoc County	3,000
Section 11-7-6, Seminole County	25,000
Section 32-18-4, Payne County	5,000
Section 15-27-1, Kay County	5,000
Section 30-7-5, Pottawatomie County	20,000
Section 15-7-6, Seminole County	10,000
Total	115,500

ANNUAL MEETING WILL BE HELD IN TULSA MAY 20-22

The annual meeting of the Natural Gasoline Association of America will be held at the Mayo Hotel, Tulsa, May 20, 21 and 22, according to an announcement by Ray Miller, secretary. The program which will be announced in the near future will be practical in nature and arranged so as to be of special interest to plant operators.

S. S. Smith of the Shell Petroleum Corp. is chairman of the committee preparing the program. Other members of the committee are F. E. Rice, Phillips Petroleum Co.; Emby Kaye, Skelly Oil Co.; and R. E. Beckley, Standard Gasoline Co.

The annual plant operators' meeting for the North Central Texas district will be held April 22 at Breckenridge, Tex. F. G. Yonker of the Chestnut and Smith Corp., and Dean Hiatt of the Texas Pacific Coal & Oil Co. are in charge of arrangements.

SHUT DOWN PLANT

FORT WORTH, Tex., Feb. 24.—The Magnolia Petroleum Co., effective March 1, will shut down its gasoline plant on the Morris lease in Coleman County, Texas. The company also will discontinue supplying the town of Coleman with gas for industrial purposes due to a shortage of gas in the Morris Pool.

The plant of the Midland Gasoline Co., which is located in the Morris Pool, will continue to operate. The plant at present is making 13,000 gallons of natural gasoline daily.

Brief Items for Petroleum Refiners

Explain Cause of Plant Explosion of New Jersey Company

NEW YORK, Feb. 22.—The death list stands at 11 with 18 workers in critical condition and a number of others suffering lesser injuries as a result of the explosion which wrecked the alcohol plant at the Bayway refinery of Standard Oil Co. of New Jersey here this week.

A statement issued by the company today characterizes the blast as "the worst accident in its toll of human life and injuries in the history of the Standard Oil Co. of New Jersey" and adds, "the sympathy of the management is extended to the families of all those who have been affected by the accident. The company is doing everything in its power to assist those involved."

Another statement issued by the company stated that there was no explosion of alcohol at the plant. "It was the explosion of extremely high quality refinery gas which was tapped by means of pipes to the technical solvents department" says the statement. "The part of the 4-inch pipe at which the leak occurred was a new steel pipe which was installed only six weeks ago, leading into the cooling drum or brine vats. At noon Tuesday the process man reported a slight leak at a T-joint near the brine tank and a tank was hurriedly placed upon it. This is an operation that frequently happens and was in the regular course of the work. There was nothing extraordinary about it. Then, about four hours later, at 3:55 p. m. to be exact, the pipe loosened at the T-joint and dropped of its own weight. The gases had apparently eroded the threads of the pipe, despite the fact that it had been in use only six weeks, and caused the pipe to drop apart. The cloud of highly volatile gas permitted to escape by the parting of the pipe was wafted by the wind directly toward the rivet heaters being used on the building under construction about 375 feet away. The terrible explosion followed when the gas cloud reached the fire in these heaters."

C. R. BARTON SUCCEEDS A. F. GARRETT AT TIDAL

C. R. Barton, vice president of the Tidal Refining Co., has been appointed vice president and general manager of the Tidal Refining Co., the Tidal Pipe Line Co. and the Tidal-Western Oil Corp., in full charge of operations, succeeding A. F. Garrett who resigned February 1.

Prior to this appointment, Mr. Barton was in charge of the manufacturing operations of the 15,000-bbl. refinery of the Tidal Refining Co. at Drumright, Okla., and the 3,000-bbl. plant at Burkburnett, Tex.

STANDARD PLANT SHUT DOWN

The Standard Oil Co. of Kentucky has shut down its Louisville refinery for an indefinite period and in the meantime will make repairs. The refinery has a skimming capacity of 4,500 bbls. daily and is equipped with Burton pressure still units.

INSTALLS SPECIAL EQUIPMENT

FRANKLIN, Pa., Feb. 22.—The Franklin Creek Refining Co. is adding considerable equipment to its refinery here. The plant has been identified principally by its special products including specially treated and highly refined medicinal oils and other specialties.

NEW YORK STANDARD AND VACUUM CONCLUDE BASIS FOR MERGER

NEW YORK, Feb. 24.—Standard Oil Co. of New York and Vacuum Oil Co. have definitely arrived at terms for consolidating the business of the two companies into a billion dollar oil company to be known as General Petroleum Corp., but pending a settlement of legal questions surrounding the merger, the proposal will not be immediately submitted to stockholders for their approval.

Herbert L. Pratt, chairman of the board, has issued the following statement from the board of directors to the stockholders of Standard Oil Co. of New York:

After many months of negotiations the Vacuum Oil Co. and the Standard Oil Co. of New York, hereafter referred to as the Vacuum company and the New York company, through their respective boards of directors, have agreed upon a basis for the merger of the properties of the two companies.

The business of the two companies is complementary in character. In general, the business of the New York company in the United States is primarily in crude production, refining and marketing of gasoline and kerosene; the business of the Vacuum company in the United States is primarily in the manufacture and marketing of high grade lubricating specialties for which it has established a world-wide reputation and market. The bulk of the business of the New York company is in the United States; the bulk of the business of the Vacuum company is in foreign countries.

The Vacuum company and the New York company have been pioneer American enterprises in building up an extensive business carried on within foreign countries. The lubricating products of the Vacuum company are marketed in practically every country in the world. In addition, the Vacuum company through numerous branches and locally incorporated Vacuum Oil companies, does a valuable business in the marketing of gasoline and kerosene in important foreign markets, including Australasia, Egypt, South, East and West Africa, and parts of Europe, where the New York company is not engaged in marketing these products. The activities of the New York company abroad have been principally in building up extensive storage and distributing facilities for the marketing of kerosene, gasoline, fuel oil and other products in the large markets of the Orient and India, in Aden and all of the markets of the Near East. In these markets by the union of the companies the Vacuum lubricating specialties and the gasoline of the New York company can be distributed to advantage in competition with other companies which market both products.

To maintain their position abroad against powerful foreign competitors, strongly entrenched as to crude supplies and refining and distributing facilities, the union of the complementary businesses of the New York and Vacuum companies and their resources is regarded as vitally important and directly promotive of American interests in business in such countries. The crude supply of the New York company and its refining facilities for gasoline and kerosene will tend to protect and extend the marketing outlets which the Vacuum company has established for those products.

Merger Useful

In the United States there have been rapid changes in conditions in the petroleum business which make this merger useful and appropriate for both companies. The prevailing method of doing business in the oil industry has come to be for each company doing a general business in petroleum products to have its own crude supply, its own refining facilities and to offer a full line of petroleum products through intensive local marketing facilities. The New York company, handling gasoline and petroleum products generally, has developed along these lines and has extensive facilities for distributing gasoline to motorists. In the United States, the Vacuum company, having devoted itself primarily to the manufacture and marketing of its high grade lubricants, has created a national consumer demand for its lubricating specialties. The merger will make available to the distinctive Vacuum products a very much wider distribution and sale, and it will also make available the large crude oil production of the subsidiaries of the New York company.

The New York company's distributing facilities are in process of expansion in response to another prevailing tendency. In this automobile age, each large oil company handling gasoline primarily, although formerly marketing its products

(Continued on Page 157)

ROSENTHAL RE-ELECTED

CHICAGO, Feb. 22.—At the annual election of the Chicago Oil Men's Club, Charles S. Rosenthal of the Apex Motor Fuel Co. was re-elected president for the third or fourth time. It is getting to be a habit with the club. But much of the success of the organization is due to his efforts. The club has recently shown considerable growth, and, while its chief purpose is to create good fellowship among the oil men, many testify to the great benefit which has come to the local fraternity through the better acquaintanceship which it affords.

ENLARGING DEL RIO REFINERY

The Del Rio Refining Co., Inc., is adding a tower and condensing equipment to its Del Rio, Tex., refinery to increase its capacity to 4,000 bbls. daily. The plant will be operated at capacity after completion of the Central Power & Light Co.'s power plant, 14 miles west of Del Rio. The higher crude schedule is expected to become effective before the end of February.

McKEAN ADDS LUB PLANT

FARMERS VALLEY, Pa., Feb. 24.—A lubricating oil plant is being added to the McKean County Refining Co.'s plant here. Recently this refinery was acquired by the Quaker State Refining Co. which markets products under the Quaker State trade mark. This is the fourth refinery to be added to the Quaker State group and has a crude capacity of 1,200 bbls. daily.

NEW JENKINS UNIT OPERATING

IOWA PARK, Tex., Feb. 24.—The Iowa Park Producing & Refining Co. has just completed and placed in operation a 1,250-bbl. Jenkins cracking unit. The refinery has a capacity of 2,500 bbls. daily.

MAGNOLIA IMPROVEMENTS

CORSICANA, Tex., Feb. 22.—The Magnolia Petroleum Co. will spend approximately $50,000 over the immediate future in making improvements in its 3,000-bbl. skimming plant here.

Interesting Papers Mark Convention of Minnesota Jobbers

Interesting discussions marked the first annual convention of the Minnesota division of the Northwest Petroleum Association held February 19 and 20 in the Radisson Hotel, Minneapolis. Following the noon luncheon with which the convention opened, E. C. Laughlin, of the Sterling Oil Co., Minneapolis, president of the Northwest association, welcomed the jobbers, outlined the developments leading up to the organization of the association and told of its activities since its incorporation. He officially reported the resignation of Paul E. Hadlick as secretary of the association to become secretary of the marketing division of the American Petroleum Institute, and the election of Elwin E. Hadlick, the association's former counsel, as the new secretary.

Addresses given included "Relation of Chemistry to the Oil Industry," C. C. Wagner, Dacotah Oil Co., Madison, N. D.; "Old Advertising versus New Advertising." Guy Cleveland, Luther-Ford Co., Minneapolis; "More Profits for the Oil Jobber in Better Merchandising," R. M. Ward, Skelly Oil Co., Eldorado, Kans.; "Lubrication," R. J. Stevenson, Shell Petroleum Corp., St. Louis, Mo.

A resolution adopted reaffirmed approval of the National Code of Practices for Marketing Refined Petroleum Products, noted with gratification the large percentage of jobbers who have accepted the code, recommended that those who have not accepted the code do so and urged strict adherence.

A letter from Hjalmar Nilsson, chief oil inspector of Minnesota, expressed regret that illness necessitated his absence from the meeting. A telegram from Roy L. Brecke, state supervisor of oil inspection, also expressed regret at inability to attend.

The following directors were chosen: three years, S. E. Smith, W. H. Barber Co., Minneapolis; J. H. Burmeister, Faribault Oil Co., Faribault; A. M. Clark, Bartles-Scott Oil Co., Willmar; J. V. Quinlan, Reed-Hynes-Quinlan Co., Hibbing. One year, A. R. Souba, Graceville Oil Co., Graceville.

More than 300 persons registered. At the annual banquet Thursday night 217 jobbers and their wives were present. There were no speeches. A vaudeville show followed the banquet.

INSTALL HYDROGENATION UNIT

CHATHAM, Ontario, Feb. 22.—Announcement is made that Imperial Oil, Ltd., a subsidiary of the Standard Oil Co. of New Jersey, is installing in its refinery at Dartmouth, Nova Scotia, a hydrogenation unit to cost upwards of $1,000,000. This plant will utilize the process secured from the German dye trust. Units of the process are being installed in United States by the Standard Oil Co. of New Jersey and its subsidiaries.

NEW UNITS IN CALIFORNIA

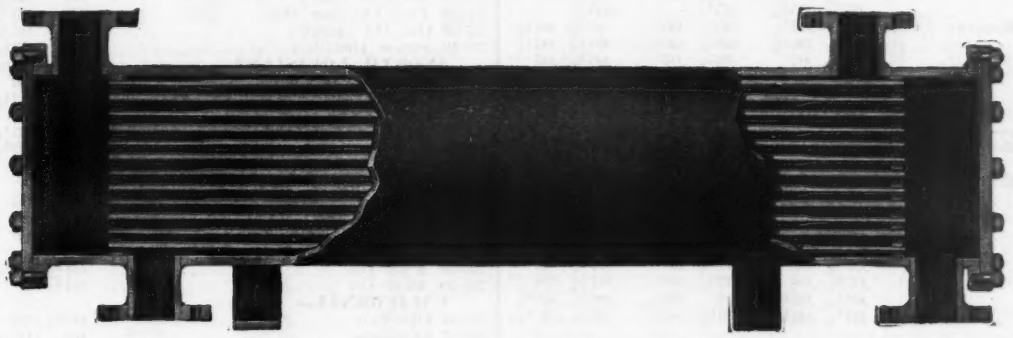
Four 3,000-bbl. cracking units of the modified Richmond type are being added to the El Segunda, Calif., refinery of the Standard Oil Co. of California. When completed this will bring the total cracking capacity of the El Segunda plant to 28,000 bbls. per day.

The company is operating eight Richmond type units at its Richmond, Calif., plant having a capacity of 16,000 bbls. daily, making the total cracking capacity of the company 44,000 bbls. daily.

New! *a remarkable improvement in heat exchanger design—*

The G-R Equaflo Exchanger

(PATENT APPLIED FOR)



EQUAL area of flow through both shell and tubes is the ideal which has always been sought by heat exchanger designers.

Heretofore this has been impossible because the resulting close tube spacing would not permit sufficient strength of tube sheets after drilling holes for the tubes.

This difficulty has finally been solved by the G-R Equaflo Heat Exchanger (patents applied for).

In this unique exchanger the tubes are swaged or reduced to a smaller diameter at one or both ends. They may accordingly be spaced as close together as desirable, at the same time retaining sufficient bridge wall in the tube sheet for necessary strength.

Baffles are therefore unnecessary in the Equaflo Exchanger, eliminating the principal cause of fouling, and making the unit far easier to clean than any other type of heat exchanger. An additional advantage is the extreme compactness resulting from this construction.

The G-R Equaflo Exchanger is built in four styles and for various pressures, and is suitable for liquid-to-liquid heat exchange, cooling or condensing service.

Write For New Bulletin

HEAT EXCHANGERS
CONDENSERS
Sub-cooling—Partial—Reflux
Shell and Tube, Atmospheric, and Condenser Box Types
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Liquid—Gas—Jacket Water
Shell and Tube, Atmospheric, and Condenser Box Types
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Milwaukee	Memphis
Minneapolis	Portland
St. Louis	

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Griscom-Russell

Heat Transfer Apparatus

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

GASOLINE AND NAPHTHA

OKLAHOMA (Group 3)—	Feb. 25		Feb. 18		Feb. 11	
50-52 450 endpoint	.06¼		.06¼		.06¼	
56-58 450 endpoint	.05¾	.06	.05¾	.06	.05¾	.06
*58-60 437 endpoint (U. S. Motor)	.065		.0652		.065	
*60-62 437 endpoint	†.06¼	.06½	.065		.0637	
*60-62 400 endpoint	.0675		.0675		.0675	
*64-66 375 endpoint	.0775		.0775		.0775	
68-70 360 endpoint	.07½	.08	.07½	.08	.07½	.08
64-66 437 endpoint (blend)	.05¾	.06¼	.06	.06½	.06	.06½
*Weighted average prices February 24, 17 and 10, as reported by representative refiners. Sales to jobbers only. †No sales reported. Prices show general market.						
NORTH TEXAS—						
56-58 450 endpoint	.05¾	.06	.05¾	.06	.05¾	.06
58-60 450 endpoint	.05½	.05¾	.05¾		.05¾	
58-60 437 endpoint (U. S. Motor)	.05¾	.06¼	.05¾	.06¼	.05¾	.06¼
60-62 400 endpoint	.06⅛	.06¼	.06⅛	.06¼	.06⅛	.06¼
64-66 390 endpoint	.06⅝	.07	.06⅝	.07	.06⅝	.07
64-66 375 endpoint	.07	.07¼	.07⅛	.07½	.07	.07¼
68-70 360 endpoint	.07½	.07¾	.07½	.07¾	.07½	.07¾
64-66 437 endpoint (blend)	.06	.06¼	.06	.06½	.06	.06½
*NORTH LOUISIANA—						
58-60 437 endpoint (U. S. Motor)	.06¾		.06¾		.06¾	
*ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.06¾		.06¾		.06¾	
PENNSYLVANIA—						
52-54 Naphtha	.07	.07¼	.07	.07¼	.07	.07¼
54-56 Naphtha	.07¼	.07½	.07	.07¼	.07	.07¼
58-60 Gasoline	.07½	.07¾	.07½	.07¾	.07½	.07¾
60 Gasoline	.07¾	.08	.07¾	.08	.07¾	.08
62 Gasoline	.07¾	.08	.07¾	.08	.07¾	.08
64 Gasoline	.08¼	.08½	.08	.08¼	.08¼	.08½
68-70 350 endpoint gasoline	.09¼	.09½	.09¼	.09½	.09¼	.09½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.09	.10	.09	.10	.09	.10
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.06	.06¼	.06¼		.06¼	
56-58 450 endpoint	.05¾	.06	.05¾	.06	.05⅝	.06
58-60 437 endpoint (U. S. Motor)	.05¾	.06½	.05⅞	.06½	.05¾	.06½
60-62 400 endpoint	.06¼	.06½	.06¼	.06½	.06¼	.06½
64-66 375 endpoint	.07¼	.07½	.07¼	.07½	.07⅛	.07½
68-70 360 endpoint	.07⅝	.07⅞	.07¾	.08	.07¾	.08
64-66 437 endpoint (blend)	.06¼		.06¼		.06¼	
GULF COAST (Export)—						
58-60 (U. S. Motor)	.08½		.08½		.08½	
60-62 400 endpoint	.09½		.09½		.09½	
61-63 390 endpoint	.09¾		.09¾		.09¾	
64-66 375 endpoint	.10		.10		.10	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

NATURAL GASOLINE

OKLAHOMA (Group 3)—	Feb. 25		Feb. 18		Feb. 11	
Grade A, 72-79.9, 375 e.p., rec. 90%	.05½	.05⅝	.05½	.05⅝	.05½	.05¾
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05⅝	.05½	.05¼		.05¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04⅝	.04¾	.04½		.04⅜	.04½
Grade BB, 84-92, 375 e.p., rec. 85%	.04½		.04¼		.04¼	
Grade C, 80-92, 375 e.p., rec. 78%	.04½		.04⅛	.04¼	.04	.04⅛
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05½	.05⅝	.05½	.05¾	.05½	.05¾
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05⅝	.05½	.05¼		.05¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04⅝	.04¾	.04½		.04⅜	.04½
Grade BB, 84-92, 375 e.p., rec. 85%	.04½		.04¼		.04¼	
Grade C, 80-92, 375 e.p., rec. 78%	.04½		.04⅛	.04¼	.04	.04⅛
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.05¾		.05½	.05¾	.05½	
Grade BB, 84-92, 375 e.p., rec. 85%	.04¾	.05	.04½	.04¾	.04½	
Grade C, 80-92, 375 e.p., rec. 78%	.04¾		.04¼	.04½	.04¼	.04½
CALIFORNIA—						
75-78 375-390 endpoint	.08½	.09	.08½	.09	.08½	.09
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05½	.05⅝	.05⅝		.05¾	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05⅝	.05½	.05¼		.05¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.04½		.04½		.04¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.04½		.04¼		.04	.04⅛
Grade C, 80-92, 375 e.p., rec. 78%	.04½		.04⅞		.04	

BURNING OIL

OKLAHOMA (Group 3)—	Feb. 25		Feb. 18		Feb. 11	
41-43 water white kerosene	.04⅛	.04⅜	.04⅛	.04⅜	.04	.04¼
41-44 water white kerosene	.04⅜	.04½	.04⅜	.04½	.04¼	.04½
NORTH TEXAS—						
41-43 water white kerosene	.04	.04⅛	.04		.04	
40-42 water white kerosene	.04		.03⅞	.04	.03⅞	.04
*NORTH LOUISIANA—						
41-43 water white kerosene	.05	.05⅛	.05		.05	
*ARKANSAS—						
41-43 water white kerosene	.05	.05⅛	.05		.05	
PENNSYLVANIA—						
43 Kerosene prime white	.05½	.05¾	.05½	.05¾	.05½	.05¾
45 Kerosene water white	.05¾	.06	.05¾	.06	.05¾	.06
46 Kerosene water white	.06	.06¼	.06	.06¼	.06¼	.06½
47 Kerosene water white	.06¼	.06½	.06¼	.06½	.06¼	.06½
300 Mineral Seal	.07	.07¼	.07	.07¼	.07	.07¼
CALIFORNIA—						
38-40 water white Kero. (high buring test)	.05	.05½	.05	.05½	.05	.05½
Engine distillate, 43-44, 445 endpoint	.07	.07½	.07	.07½	.07	.07½
Engine distillate, 42-44, 480 endpoint	.06¾	.07¼	.06¾	.07¼	.06¾	.07¼
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.04⅛	.04⅜	.04	.04¼	.04	.04¼
42-44 water white kerosene	.04¼	.04¾	.04¼	.04¾	.04¼	.04¾
GULF COAST (Export)—						
41-43 prime white	.07		.07		.07	
41-43 water white	.08		.08		.08	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

OKLAHOMA (Group 3)—	Feb. 25		Feb. 18		Feb. 11	
Below 18 Fuel Oil, per bbl.	.70	.75	.70	.80	.70	.80
18-22 Fuel Oil, per bbl.	.75	.80	.75	.85	.75	.85
20-22 Fuel Oil, per bbl.	.75	.85	.80	.85	.85	
22-26 Fuel Oil, per bbl.	.80	.85	.82½	.87½	.85	.90
24-26 Fuel Oil, per bbl.	.80	.90	.90	.95	.90	.95
26-30 Fuel Oil, per bbl.	.85	.95	.95	1.00	.95	1.05
28-30 Fuel Oil, per bbl. (industrial)	1.05	1.10	1.05	1.10	1.05	1.15
32-36 Gas Oil (industrial)	.02½	.02¾	.02⅝	.02⅞	.02¾	.02⅞
32-36 Gas Oil (straw color)	.02⅞	.03⅛	.03	.03⅛	.03	.03⅛
36-38 Distillate	.03	.03¼	.03⅛	.03⅜	.03¼	.03⅜
38-40 Straw Distillate	.03⅛	.03½	.03⅜	.03¾	.03⅜	.03¾
NORTH TEXAS—						
Below 20 Fuel Oil, per bbl.	.60	.65	.60	.65	.60	.65
24-26 Fuel Oil, per bbl.	.80	.90	.80	.90	.80	.90
32-36 Gas Oil (straw)	.02½	.02¾	.02½	.02¾	.02½	.02¾
38-40 Straw Distillate	.03	.03⅛	.03⅛	.03¼	.03⅛	.03⅜
*NORTH LOUISIANA—						
18-20 Fuel Oil, per bbl.	.85	.90	.85	.90	.85	.90
30-32 Gas Oil	.03	.03⅛	.03	.03¼	.03	.03½
*ARKANSAS—						
33-36 Distillate	.03⅛	.03¼	.03¼	.03¾	.03¼	.03¾
30-32 Gas Oil	.03	.03⅛	.03	.03¼	.03	.03¼
16-22 Refinery Fuel Oil, per bbl.	.85	.90	.85	.90	.85	.90
GULF COAST (South Texas)—						
Gas Oil	.03¾	.04	.03¾	.04	.03¾	.04
Bunker C Fuel (cargo lots), per bbl.	.65	.70	.65	.70	.65	.70
Bunker C Fuel (small lots)	.95	1.00	.95	1.00	.95	1.00
PENNSYLVANIA—						
30-34 Fuel Oil	.04½	.04¾	.04½	.04¾	.04½	.04¾
36-40 Fuel Oil	.04¾		.04¾		.04¾	
CALIFORNIA—						
33-36 Distillate	.03½	.04	.03½	.04	.03½	.04
26-32 Distillate	.02	.02½	.02	.02½	.02	.02½
15-20 Fuel Oil, Bunker (at tidewater)	.70	.80	.70	.80	.70	.80
15-20 Fuel Oil, (cargo lots), per bbl.	.60	.75	.60	.75	.60	.75
27 plus Diesel, per bbl.	.90	1.05	.90	1.05	.90	1.05
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.85	.90	.90	.95	.90	.95
18-22 Fuel Oil, per bbl.	.75	.80	.80	.85	.77½	.85
28-30 Fuel Oil, per bbl.	1.07½	1.12½	1.10	1.15	1.12½	1.20
32-36 Gas Oil (zero)	.02⅞	.03¼	.03⅛	.03¼	.03⅛	.03⅜
32-36 Gas Oil (industrial)	.02½	.02⅝	.02½	.02¾	.02½	.02⅝
36-38 Distillate	.03	.03⅛	.03	.03¼	.03	.03¼
38-40 Straw Distillate	.03¼	.03⅜	.03⅛	.03½	.03¼	.03½

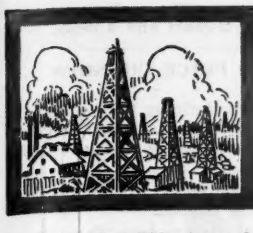
*Louisiana, Arkansas, Mississippi and East Texas delivery.

LUBRICATING OIL AND WAX

OKLAHOMA (Group 3)—	Feb. 25		Feb. 18		Feb. 11	
100 vis., 2 color, 20-25 cold test	.06¾	.07	.06¾	.07	.06¾	.07
100 vis., 3 color, 20-25 cold test	.05¾	.06	.05¾	.06	.05¾	.06
150 vis., 3 color, 20-25 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
150 vis., 4 color, 20-25 cold test	.07¾	.08	.07¾	.08	.07¾	.08
180 vis., 3 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
180 vis., 4 color, 23-28 cold test	.09¼	.09½	.09¼	.09½	.09¼	.09½
180 vis., 5 color, 23-28 cold test	.09	.09¼	.09	.09¼	.09	.09¼
200 vis., 3 color, 23-28 cold test	.10¾	.11	.10¾	.11	.10¾	.11
200 vis., 4 color, 23-28 cold test	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 5 color, 23-28 cold test	.09¾	.10	.09¾	.10	.09¾	.10
240 vis., 3 color, 25-30 cold test	.14¼	.14½	.14¼	.14½	.14¼	.14½
240 vis., 4 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 5 color, 25-30 cold test	.12¾	.13	.12¾	.13	.12¾	.13
280 vis., 3 color, 25-30 cold test	.16¾	.17	.16¾	.17	.16¾	.17
280 vis., 4 color, 25-30 cold test	.15¾	.16	.15¾	.16	.15¾	.16
280 vis., 5 color, 25-30 cold test	.14¾	.15	.14¾	.15	.14¾	.15
Cylinder Stocks:						
600, steam refined, light green	.10	.12	.10	.12	.10	.12
600, steam refined, dark green	.09	.11	.09	.11	.09	.11
190-200 vis., D color Bright Stock	.41	.42	.41	.42	.41	.42
150-160 vis., D color Bright Stock	.37		.37		.37	
150-160 vis., E color Bright Stock	.32	.35	.32	.35	.32	.35
Waxes:						
124-126 White Crude Scale Wax	.02½	.02⅝	.02½	.02⅝	.02½	.02⅝
PENNSYLVANIA—						
34 Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
34 Sundebloom	.07½	.07¾	.07½	.07¾	.07½	.07¾
36 Miners' Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
150, 3 color	.15½	.16	.15½	.16	.15½	.16
180, 3 color	.21½	.22	.21½	.22	.21½	.22
200, 3 color	.25	.25½	.25	.25½	.24½	.25
220, 3 color	.29½	.30	.29½	.30	.29½	.30
600, steam refined	.22½	.23	.22½	.23	.22½	.23
635, steam refined	.28½	.29	.28½	.29	.28½	.29
650, steam refined	.29½	.30	.29½	.30	.29½	.30
600, Pennsylvania Flash	.30½	.31	.29½	.30	.30½	.31
630, Pennsylvania Flash	.34½	.35	.34½	.35	.34½	.35
600, E filtered	.28½	.30	.30½	.31	.30½	.31
600, D filtered	.34½	.35	.34½	.35	.34½	.35
Pennsylvania Bright Stocks	.40	.40½	.41½	.42	.42	
*122-124 White Crude Scale Wax	.02⅞	.03	.03⅛		.03⅛	
124-126 White Crude Scale Wax	.03	.03⅛	.03¼		.03¼	

*At New York.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.06½	.06¾	.06¼	.06½	.06¼	.06½
No. 3 color, 200 vis., pale oil	.09¼	.09½	.09¼	.09½	.09¼	.09½
No. 3 color, 300 vis., pale oil	.10¾		.10¾		.10¾	.11
No. 3½ color, 500 vis., pale oil	.11½	.12	.11½	.12	.11½	.12
No. 4 color, 750 vis., pale oil	.13¼	.13½	.13¼	.13½	.13¼	.13½
No. 5 color, 1200 vis., pale oil	.16		.16			
No. 5 to 6 color, 1200 vis., pale oil	.15		.15			
No. 5 to 6 color, 200 vis., red oil	.08½	.08¾	.08½	.08¾	.08½	.08¾
No. 5 to 6 color, 300 vis., red oil	.09½	.10	.09½	.10	.09½	.10
No. 5 to 6 color, 500 vis., red oil	.10¾	.11¼	.10¾	.11¼	.10¾	.11¼
No. 5 to 6 color, 750 vis., red oil	.12¾		.12¾		.12¾	.13



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

	Feb. 25		Feb. 18		Feb. 11	
No. 2½ color, 200 vis., pale filtered	.11	.12	.11	.12	.11	.12
No. 2½ color, 300 vis., pale filtered	.12	.13	.12	.13	.12	.13
No. 2½ color, 500 vis., pale filtered	.14½	.15	.14½	.15	.14½	.15
No. 2½-3 color, 750 vis., pale filtered	.17	.19	.17	.19	.17	.19
CALIFORNIA—						
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½
Red Neutral:						
200 vis., 4½ 5 color	.11	.11¼	.11	.11¼	.11	.11¼
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14
500 vis., 4½-5 color	.14¼	.15½	.14¼	.15½	.14¼	.15½
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Feb. 25		Feb. 18		Feb. 11	
Gasoline, U. S. Motor, 58-60, 437	.08½		.08½	.08¾	.08⅝	.08¾
Kerosene, water white, 41-43	.07¾		.07¾		.07¾	
*Fuel Oil, Bunker "C," 14-16, per bbl.	1.05		1.05		1.05	
†Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.04¾	.05¼	.04¾	.05¼	.04¾	.05¼
25 pale Paraffin Oil	.10½		.10½		.10½	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.12½		.12½		.12½	
250 red Paraffin Oil	.11½		.11½		.11½	
225 red Paraffin Oil	.10		.10		.10	
200 red Paraffin Oil	.09¼		.09¼		.09¼	
Refined Wax:						
120-122 a.m.p., per lb.	.03⅞		.03⅞		.03⅞	
125-127 a.m.p., per lb.	.04⅛		.04⅛		.04⅛	
130-132 a.m.p., per lb.	.04⅝		.04⅝		.04⅝	
133-135 a.m.p., per lb.	.05⅝		.05⅝		.05¾	
135-137 a.m.p., per lb.	.05¾		.05¾		.05⅞	
Petrolatum in barrels, in carload lots, per pound:						
Dark Green	.01⅞		.01⅞		.01⅞	
Amber	.03⅜		.03⅜		.03⅜	
Extra Amber	.03½		.03½		.03½	
Cream	.06⅜		.06⅜		.06⅜	
Lily White	.06½		.07		.07	
Snow White	.08⅜		.08⅜		.08⅜	

*Lighterage 5.0 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Feb. 25		Feb. 18		Feb. 11	
Kerosene, prime white	.07¾		.07¾		.07¾	
Kerosene, water white	.09		.09		.09	
600, steam refined cylinder stocks, in bbls.	.30	.31	.30	.31	.30	.31
635, steam refined	.32	.33	.32	.33	.32	.33
650, steam refined	.36	.37	.36	.37	.36	.37
600, Pennsylvania Flash	.40		.40		.40	
630, Pennsylvania Flash	.43		.43		.43	
600, Warren E	.39½		.39½		.39½	
600, Oil City E	.38½		.38½		.38½	
Light 140-150 Bright Stocks	.49½	.50	.49½	.50	.49½	.50
Dark 140-150 Bright Stocks	.48½	.49	.48½	.49	.48½	.49

LOS ANGELES EXPORT PRICES

	Feb. 25		Feb. 18		Feb. 11	
Kerosene, water white	.04½	.05	.04½	.05	.04½	.05
U. S. Motor Gasoline, 53-55, 437 e.p.	.06¼	.06¾	.06¼	.06¾	.06¼	.06¾

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Oklahoma City—Same as other Mid-Continent price schedule except Empire Pipe Line Co. posts all oil 40 gravity and above at $1.33 on February 15, 1930.

Corsicana heavy (Jan. 16, 1930)* ..... $ .70

Other fields ..... See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

WEST TEXAS

Iatan* ..... Same as North Texas

Crane-Upton-Crockett, Pecos, Winkler and Mitchell ..... See gravity table, column 3

Howard and Glasscock ..... See gravity table, column 11

Chalk† ..... $ .65

*Includes Westbrook Field.
†Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (May 20, 1929) ..... $ .85

Smackover, 24 gravity and above (May 20, 1929) 1.00

Cotton Valley, below 36 gravity (Jan. 17, 1930) ..... .80

Bellevue (Jan. 17, 1930) 1.05

Urania (Jan. 16, 1930) ..... .85

East El Dorado (May 22, 1929) ..... .85

Other fields ..... See gravity table

Cotton Valley crude about 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co.; Urania Grade A (Jan. 15, 1930)* ..... $1.05 posted by Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co.

GULF COAST

Grade B ..... See gravity table

Jennings, La. (Jan. 15, 1930)† 1.00

Refugio (Jan. 20, 1930)¶ ..... .55

Sorrento (Jan. 15, 1930)‡ 1.00

Markham (Jan. 15, 1930)§ ..... .75

High Island (Jan. 15, 1930)¶ ..... .85

*Humble Oil & Refining Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Pipe Line Co. ¶Posted by Gulf Coast Pipe Line Co.

ROCKY MOUNTAIN STATES
Ohio Oil Co.-Midwest Refining Co.
(Effective Feb. 15, 1930)

Rock Creek, Wyo. $1.25

Salt Creek ..... See gravity table

Big Muddy $1.33

Grass Creek, heavy (July 27, 1928) ..... .90

Grass Creek, light 1.45

Mule Creek (May 21, 1929) 1.20

Elk Basin 1.45

Lance Creek 1.53

Poison Spider (March 14, 1927) 1.00

Notches (March 14, 1927) ..... .65

Rex Lake (February 23) 1.10

Osage (May 21, 1929) 1.65

Lost Soldier (contract, May 22) 1.05

Hamilton Dome (March 14, 1927) ..... .85

Pedro (May 21, 1929) 1.25

Greybull (May 21, 1929) 1.65

Four Bear (May 21, 1929) ..... .85

Cat Creek (Montana) (Feb. 15, 1930) 1.45

Sunburst (Montana) (Feb. 15, 1930) 1.65

Torchlight (May 21, 1929) 1.65

Hogback (New Mexico) (May 21, 1929) 1.70

Artesia (New Mexico) (Feb. 15, 1930) .. 1.00

Note—Salt Creek, Osage, Cat Creek, Grey-

(Continued on Page 150)

CRUDE OIL GRAVITY TABLE

Gravity—	1 Okla., Kans., N. C. Texas	2 No. La. and Arkansas	3 Crane, Upton, Crockett, Winkler, Pecos, Mitchell, (West Texas) Lea, N. Mex.	4 Stephens, Ark.	5 Wheeler (Texas Panhandle)	6 Gray County (Texas Panhandle)	7 Carson and Hutchinson (Texas Panhandle)	8 Salt Creek, Wyo.	9 Grade B and Light Crude (G. Coast)	10 Somerset (South Central Texas)	11 Howard and Glasscock, W. Tex.
24 and above	....	....	....	....	....	....	....	....	....	....	....
Below 24	....	....	....	....	....	....	....	....	....	....	....
Below 25	.60	....	.55	....	....	....	....	....	.90	....	.55
25 to 25.9	.66	....	.58	....	....	....	....	....	.93	....	.58
26 to 26.9	.72	....	.61	....	....	....	....	....	.96	....	.61
27 to 27.9	.78	....	.64	....	....	....	....	....	.99	....	.64
Below 28	....	.78	....	.90	.70	.69	.72	....	....	....	....
28 to 28.9	.84	.84	.67	.94	.70	.69	.72	....	1.02	....	.66
29 to 29.9	.90	.90	.70	.98	.70	.75	.72	.90	1.05	....	.68
30 to 30.9	.96	.96	.73	1.02	.76	.81	.72	.96	1.08	....	.70
31 to 31.9	1.02	1.02	.76	1.06	.82	.87	.72	1.02	1.11	....	.72
32 to 32.9	1.08	1.08	.79	1.10	.88	.93	.78	1.08	1.14	1.05	.74
33 to 33.9	1.11	1.11	.82	....	.91	.96	.81	1.11	1.17	1.07	.76
34 to 34.9	1.14	1.14	.85	....	.94	.99	.84	1.14	1.20	1.09	.78
35 to 35.9	1.17	1.17	.88	....	.97	1.02	.87	1.17	1.23	1.11	.80
36 to 36.9	1.20	1.20	.91	....	1.00	1.05	.90	1.20	....	1.13	.82
37 to 37.9	1.23	1.23	....	....	1.03	1.08	.93	1.23	....	1.15	....
38 to 38.9	1.26	1.26	....	....	1.06	1.11	.96	....	....	1.17	....
39 to 39.9	1.29	1.29	....	....	1.09	1.14	.99	....	....	....	....
40 to 40.9	1.32	1.32	....	....	1.12	1.17	1.02	....	....	....	....
41 to 41.9	1.35	1.35	....	....	1.15	1.20	1.05	....	....	....	....
42 to 42.9	1.38	1.38	....	....	1.18	1.23	1.08	....	....	....	....
43 to 43.9	1.41	1.41	....	....	1.21	1.26	1.11	....	....	....	....
44 and above	1.44	1.44	....	....	1.24	1.29	1.14	....	....	....	....

Column 1, Note—Above prices posted by Prairie Oil & Gas Co. on February 15, 1930; by Sinclair Oil & Gas Co. February 13, 1930. On January 15, 1930, Humble Oil & Refining Co. posted North Central Texas crude at following prices: Below 25 gravity 60 cents; a 6-cent differential added per degree to 32-32.9 gravity at $1.08 and a 3-cent differential above making 44 gravity and above at $1.44. The Carter Oil Co. posted this schedule for Oklahoma and Kansas, January 16. Same date Magnolia posted these prices in North Central Texas. On January 17, Magnolia posted the schedule for Oklahoma and Kansas.

North Central Texas—Includes Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona and Moran Pools.

Column 2—Arkansas and North Louisiana—(Caddo, Bull Bayou, Crichton, Cotton Valley above 36 gravity, DeSoto, Haynesville, Homer and El Dorado only). Texas Pipe Line Co., January 15, 1930. Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., January 16, 1930.

Column 3—Humble Oil & Refining Co., January 15, 1930, and Magnolia Petroleum Co., January 16, 1930.

Column 4—Atlantic Oil Producing Co. and Louisiana Oil Refining Corp., May 21, 1929.

Columns 5, 6 and 7—Humble Oil & Refining Co., January 15, 1930, and Magnolia Petroleum Co., January 16, 1930. Adopted by Prairie Oil & Gas Co., February 15.

Column 8—Midwest Refining Co., February 15, 1930. All crude over 37 gravity $1.23 per barrel.

Column 9—Humble Oil & Refining Co., January 15, 1930 (schedule ends 35 and above).

Column 10—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

Column 11—Humble Oil & Refining Co., January 15, 1930, Magnolia posted Howard-Glasscock crude same schedule as West Texas, January 16, 1930.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective January 18, 1929)

Gravity—	1 Salt Lake, Newport, Summerland, Lawndale, Los Angeles Fullerton, Richfield Torrance, Olinda-Brea Alamitos Heights, Huntington Beach, Signal Hill (Nov. 8) Athens, Inglewood, Rosecrans-Dominguez, Watsonville	2 Whittier, La Habra, Coyote Hills	3 Midway-Sunset, Elk Hills, Lost Hills, Beirdige, Buena Vista Hills	4 Montebello	5 Santa Fe Springs (Nov. 8)	6 Santa Maria, Coalinga	7 Wheeler Ridge Fruitvale	8 Orcutt, Ventura, Rincon	9 Ventura Ave., (Nov. 8)	10 Elwood Terrace	11 Seal Beach (Nov. 4)
14 to 14.9	.70	.70	.50	.70	....	.50	.50	.55	.70	....	.70
15 to 15.9	.70	.70	.50	.70	....	.50	.50	.55	.70	....	.70
16 to 16.9	.70	.70	.50	.70	....	.50	.50	.55	.70	....	.70
17 to 17.9	.70	.70	.50	.70	....	.50	.50	.55	.70	....	.70
18 to 18.9	.75	.75	.55	.70	....	.56	.56	.70	.75	....	.75
19 to 19.9	.80	.80	.62	.75	....	.62	.62	.70	.80	....	.80
20 to 20.9	.85	.84	.68	.80	....	.68	.68	.70	.85	....	.85
21 to 21.9	.89	.88	.74	.85	.89	.74	.74	.86	.86	....	.89
22 to 22.9	.93	.91	.80	.90	.92	.80	.80	.87	.87	....	.93
23 to 23.9	.97	.94	.85	.95	.95	.85	.85	.90	.90	....	.97
24 to 24.9	1.01	.97	.90	.98	.98	.88	.88	.94	.94	....	1.01
25 to 25.9	1.05	1.00	.95	1.01	1.01	.91	.91	.98	.98	....	1.05
26 to 26.9	1.09	1.04	1.00	1.04	1.04	.94	.94	1.02	1.02	....	1.09
27 to 27.9	1.13	1.08	1.05	1.07	1.07	.98	.97	....	1.06	....	1.13
28 to 28.9	1.17	1.12	1.10	1.10	1.10	1.02	....	....	1.10	....	1.17
29 to 29.9	1.21	1.16	1.16	1.13	1.15	1.06	....	....	1.14	....	1.21
30 to 30.9	1.25	1.20	1.22	1.16	1.20	1.10	....	....	1.18	....	1.25
31 to 31.9	1.30	....	1.28	....	1.25	1.14	....	....	1.23	....	1.30
32 to 32.9	1.35	....	1.34	....	1.30	1.18	....	....	1.28	....	1.35
33 to 33.9	1.41	....	1.40	....	1.35	1.22	....	....	1.34	....	....
34 to 34.9	1.47	....	1.46	....	1.40	1.26	....	....	1.40	1.16	....
35 to 35.9	1.53	....	....	....	1.45	1.30	....	....	1.46	1.22	....
36 to 36.9	1.59	....	....	....	1.50	....	....	....	1.52	1.28	....
37 to 37.9	1.65	....	....	....	1.55	....	....	....	1.58	1.34	....
38 to 38.9	1.71	....	....	....	1.60	....	....	....	1.64	1.40	....
39 to 39.9	1.77	....	....	....	1.65	....	....	....	1.70	1.46	....
40 to 40.9	1.83	....	....	....	....	....	....	....	1.76	1.52	....
41 to 41.9	1.89	....	....	....	....	....	....	....	1.82	1.58	....
42 to 42.9	1.95	....	....	....	....	....	....	....	1.88	1.64	....

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain 11 to 13.9 gravity 45 cents, 14 gravity and above 50 cents, effective October 2, 1929. On December 1, 1928, the Union Oil Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 45 cents; 14 gravity and above 50 cents.

Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity; Dominguez and Athens-Rosecrans, 24 to 42.9 gravity.

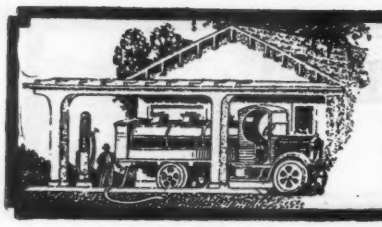
Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midwest-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 45 cents.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9—Posted by Union Oil Co. only.

Kettleman Hills, 55 gravity and above, $1.65 (posted by Standard Oil Co. of California).



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Feb. 25

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago†	17.0	18.0	3.0	13.0
Decatur, Ill.	17.2	18.2	3.0	13.1
E. St. Louis	16.4	17.4	3.0	12.2
Joliet	17.4	18.4	3.0	13.3
Peoria	17.2	18.2	3.0	13.1
Quincy	17.2	18.2	3.0	12.9
Davenport, Ia.	17.5	18.5	3.0	13.3
Des Moines	17.5	18.5	3.0	13.3
Keokuk	17.5	18.5	3.0	13.3
Sioux City	17.1	18.1	3.0	12.9
Duluth, Minn.	18.5	19.5	3.0	13.9
Mankato	18.1	19.1	3.0	13.7
Minneapolis	18.2	19.2	3.0	13.9
LaCrosse, Wis.	17.2	18.2	2.0	14.0
Milwaukee	16.1	17.1	2.0	12.9
Madison	16.3	17.3	2.0	13.1
Detroit, Mich.	17.8	18.8	3.0	14.7
Grand Rapids	17.7	18.7	3.0	14.6
Saginaw	17.9	18.9	3.0	14.8
Evansville, Ind.	18.0	19.0	4.0	14.0
Fort Wayne	18.4	19.4	4.0	14.4
Indianapolis	18.2	19.2	4.0	14.2
South Bend	18.4	19.4	4.0	14.4
Fargo, N. D.	19.9	21.9	3.0	15.9
Huron, S. D.	19.3	21.3	4.0	14.7
Sioux Falls	18.1	19.1	4.0	14.4
K. C., Mo.*	16.9	17.9	3.0	11.6
Springfield*	16.8	17.8	3.0	12.5
St. Louis*	15.9	16.9	2.5	12.3
St. Joseph	16.5	17.5	2.0	12.2
Wichita, Kans.	15.8	14.8	3.0	11.8
Bartlesville, Ok.	16.5	17.5	4.0	11.5

*State tax 2 cents; remainder city tax.
†Effective February 20, discounts on Q.D.A. in Chicago district 2 cents off service station price on purchases of 500 gallons or more per month and 4 cents on purchases of 1,000 gallons or more per month.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	14.7	13.9
V. M. & P. Naphtha	16.7	13.9
Cleaner's naphtha	17.0	14.9
Stanisol	17.0	15.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 349 gallons	8.0
350 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline; 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents. Discounts are allowed each month and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	16.0	20.0	4.0	12.0
Fort Worth	16.0	19.0	4.0	12.0
Houston	15.0	19.0	4.0	11.0
San Antonio	15.0	19.0	4.0	11.0
El Paso	16.0	20.0	4.0	14.0
Texarkana	17.0	19.0	4.0	12.0
Muskogee*	14.0	16.0	4.0	10.0
Okla. City*	15.0	18.0	4.0	10.0
Tulsa*	15.0	19.0	4.0	10.0
Ft. Smith, Ark.	15.0	17.0	5.0	12.0
Little Rock	18.0	20.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	18.0	21.0	4.0	15.5
Pueblo	18.0	21.0	4.0	15.5
Grand Junction	22.0	25.0	4.0	19.0
Casper, Wyo.	18.0	21.0	4.0	14.0
Cheyenne	19.5	22.5	4.0	15.5
Butte, Mont.	23.5	26.5	5.0	20.0
Helena	23.5	26.5	5.0	20.0
Salt Lake, Utah	20.0	23.0	3.5	17.0
Albu'que, N. M.	20.0	22.0	5.0	17.0
Boise, Idaho	22.5	25.5	4.0	19.0
Twin Falls	23.5	25.5	4.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	15.0	*21.0	...	13.0
Philadelphia	15.0	*21.0	...	13.0
Scranton	15.0	*21.0	...	13.0
Allentown	15.0	*21.0	...	13.0
Altoona	15.0	*21.0	...	13.0
Erie	15.0	*19.0	...	13.0
Dover, Del.	18.0	20.0	3.0	13.0
Wilmington	18.0	20.0	3.0	13.0
Springf'd, Mass.	16.5	18.5	2.0	13.5
Worcester	16.3	18.3	2.0	13.3
Boston	15.5	17.5	2.0	12.5
Providence, R.I.	15.7	17.7	2.0	12.7
Hartford, Conn.	16.5	18.5	2.0	13.5
New Haven	16.6	18.6	2.0	13.6

*Includes tax of 4.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	15.6	17.6	2.0	14.6
New York*	15.3	17.3	2.0	13.3
Buffalo	15.8	17.8	2.0	13.8
Rochester	16.0	18.0	2.0	13.0
Syracuse	16.8	18.8	2.0	13.8
Boston, Mass.	15.5	17.5	2.0	12.5
Augusta, Me.	18.8	20.8	4.0	13.8
Manch't'r, N. H.	18.4	20.4	4.0	13.4
Burlington, Vt.	17.6	19.6	4.0	14.3

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.	20.0	21.0	4.0	15.5
Augusta	21.0	23.0	4.0	15.5
Macon	21.0	23.0	4.0	15.5
Savannah	20.0	22.0	4.0	14.0
Birm'ham, Ala.	19.0	21.0	4.0	14.5
Mobile	19.0	21.0	4.0	13.5
Montgomery	20.0	22.0	4.0	15.0
Clarks'le, Miss.	18.0	20.0	5.0	12.5
Jackson	19.0	21.0	5.0	13.0
Natchez	18.5	20.5	5.0	13.0
Gulfport	20.5	22.5	5.0	13.0
Vicksburg	18.5	20.5	5.0	13.0
Jack'ville, Fla.	20.0	24.0	6.0	14.0
Miami	21.0	23.0	6.0	14.0
Pensacola	18.0	20.0	6.0	13.5
Tampa	20.0	22.0	5.0	13.0
Lexington, Ky.	18.0	20.0	5.0	14.5
Covington	19.0	20.0	5.0	14.5
Louisville	19.0	21.0	5.0	13.0
Ashland	20.0	21.0	5.0	15.0
Catlettsburg	20.0	21.0	5.0	15.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. Pensacola and Mobile taxes include 1-cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
San Francisco	20.0	23.0	3.0	15.5
Los Angeles	19.5	22.5	3.0	15.5
Reno, Nev.	25.0	28.0	4.0	19.0
Portland, Ore.	26.5	24.5	3.0	16.5
Seattle, Wash.	20.5	23.5	3.0	16.5
Tacoma	20.5	23.5	3.0	16.5
Spokane	24.5	27.5	3.0	20.5
Phoenix, Ariz.	18.0	22.0	4.0	20.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	18.25	20.25	4.0	13.25
McCook	19.75	21.75	4.0	14.75
Norfolk	18.75	20.75	4.0	13.75
N. Platte	19.75	21.75	4.0	14.50
Scottsbluff	19.75	21.75	4.0	14.25

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlantic City	16.5	18.5	2.0	13.5
Newark, N. J.	15.5	17.5	2.0	12.5
Annapolis, Md.	18.0	20.0	4.0	13.0
Baltimore	17.2	19.2	4.0	10.5
Cumberland	19.0	21.0	4.0	14.0
Washington	15.7	17.7	2.0	12.7
Danville, Va.	19.8	21.8	5.0	13.8
Norfolk	18.3	20.3	5.0	11.0
Petersburg	19.3	21.3	5.0	13.3
Roanoke	20.0	22.0	5.0	14.0
Richmond	18.7	20.7	5.0	12.7
Charles'n, W.Va.	18.5	20.5	4.0	12.5
Keyser	19.1	21.1	4.0	14.1
Parkersburg	17.2	19.2	4.0	11.2
Wheeling	18.4	20.4	4.0	12.4
Charlotte, N. C.	20.3	22.0	5.0	14.3
Hickory	20.8	22.8	5.0	14.8
Mt. Airy	20.5	22.5	5.0	14.5
Salisbury	20.7	22.7	5.0	14.7
Charleston, S.C.	19.3	21.3	6.0	12.3
Columbia	21.2	23.2	6.0	14.2

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points*	18.0	19.0	4.0	†12.0

*Dealers and commercial accounts 2 cents under tank wagon.
†Service station price 14 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.*	15.0	15.0	5.0	12.0
Baton Rouge	16.0	16.0	4.0	14.0
Alexandria	17.0	19.0	5.0	14.0
Lafayette†	18.0	20.0	5.0	14.0
Lake Charles†	18.0	20.0	5.0	14.0
Shreveport	16.0	18.0	4.0	14.0
Knoxv'le, Tenn.	20.0	22.0	5.0	16.0
Memphis	18.0	20.0	5.0	12.5
Chattanooga	20.0	22.0	5.0	13.0
Nashville	19.0	21.0	5.0	16.0
Bristol	19.0	20.0	5.0	14.0
Lt. Rock, Ark.	18.0	20.0	5.0	13.0

*Tax of 5 cents includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.
†Includes 1-cent parish tax.

TANK WAGON CHANGES

Standard Oil Co. of Kentucky advanced kerosene 1½ cents in Birmingham, Ala., February 17 to 14½ cents. The gasoline tank wagon and station prices were advanced 2 cents at Birmingham on the same date to 19 cents and 21 cents. At Mobile, Ala., the gasoline tank wagon and station prices were advanced 1 cent to 19 cents and 21 cents. At Montgomery, Ala., the gasoline tank wagon and station prices were advanced 1 cent to 20 cents and 22 cents. Above changes made February 17.

Standard Oil Co. of Louisiana reduced the gasoline station price 1 cent in New Orleans, La., to 15 cents on February 20. At Baton Rouge, La., the gasoline station price was reduced 1 cent on February 15 and again reduced 1 cent on February 20 making the price on that date 16 cents.

Standard Oil Co. of New Jersey reduced kerosene 1 cent January 30 in Charleston, W. Va., Parkersburg, W. Va., and Wheeling, W. Va., making the new prices 12.5 cents, 11.2 cents and 12.4 cents, respectively.

Magnolia Petroleum Co. reduced the gasoline tank wagon and station prices 1 cent in Dallas and Fort Worth, Tex., February 18, making the new prices 16 cents and 20 cents in Dallas and 16 cents and 19 cents in Fort Worth.

Standard Oil Co. of New York reduced the gasoline tank wagon and station prices in Albany, N. Y., and Burlington, Vt., February 24, to 13.6 cents and 15.6 cents without the respective state taxes of 2 cents and 4 cents.

CRUDE PRICE CHANGES

The Stoll Oil Refining Co. reduced Oil City, Ky., crude in its lines 10 cents, February 19, making the new price $1.45.

EARLY REVIVAL IN MEXICO

According to reports from Tampico, an early revival in Mexican oil field operations is in prospect this year, with the resumption of large-scale operations dependent upon prompt action by the Government in the confirmation of oil land concessions. Gulf Coast Oil Co. and Huasteca Petroleum Co., the latter a subsidiary of the Pan American Petroleum & Transport Co., are reported waiting confirmation by the Department of Industry, Commerce and Labor of concessions that have been requested before beginning new drilling and generally expanding their operations.

CRUDE OIL PRICES

(Continued from Page 149)

bull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

Darst Creek (Jan. 15, 1930)*	$1.05
Luling (Jan. 16, 1930)*	.75
Mirando (Jan. 15, 1930)†	.75
Salt Flat (Jan. 15, 1930)‡	1.05
Rockdale Minerva (April 15):	
Below 28 gravity	1.25
28-38.9 gravity	1.27
39-39.9 gravity	1.29
40 and above	1.31
Thrall‡	...
Callihan (May 15)	1.75
Lytton Springs (Lockhart)	See gravity table
Somerset	See gravity table

*Posted by Magnolia Petroleum Co.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.
‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight.
‖Humble Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective Feb. 17, 1930)

Penna Grade Oil in New York Transit Lines (New York)	$2.80
Bradford District Oil in National Transit Lines (Pennsylvania)	2.80
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.80
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	2.75
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	2.65
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.45
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 23, 1929)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Line (Feb. 17, 1930)	1.55
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines (Feb. 17, 1930)	1.65
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (Feb. 17, 1930)	1.37
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29)	.60
Wayne district oil in Cumberland Pipe Lines (Feb. 17, 1930)	1.24

*Oil run prior to July 1, 1929, $2.95.

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective Feb. 15, 1930)

Lima	$1.65
Wooster	1.75
Illinois	1.60
Indiana	1.42
Princeton	1.60
Plymouth	1.18
Waterloo (November 17, 1926)	1.35
Western Kentucky	1.50
Dundee, Mich. (Feb. 13, 1930)‖	..... Same as Mid-Continent gravity scale
Upper and Lower Traverse sands, Mich.‖	..... Same as Mid-Continent gravity scale
Midland, Mich. (Feb. 6, 1930)*	1.25
Saginaw, Mich., Saginaw sand (February 10)†	1.89
Saginaw, Mich., Berea sand (February 10)†	1.79
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (March 15)‡	1.50
Oil in line in Stoll Oil Refinery Co. in Oil City, Ky. (Feb. 19, 1930)§	1.45
Oil Springs (Canada) (Feb. 15, 1930)¶	2.12
Petrolia (Canada) (Feb. 15, 1930)¶	2.15

*Posted by Pure Oil Co.
†Posted by Sun Oil Co.
‡Posted by Paragon Development Co.
§Posted by Stoll Oil Refining Co.
¶Posted by Imperial Oil Co., Ltd.
‖Posted by Standard of Indiana for boat shipment.

MEXICAN CRUDE

Panuco*	$ .65

*Based on January transactions.

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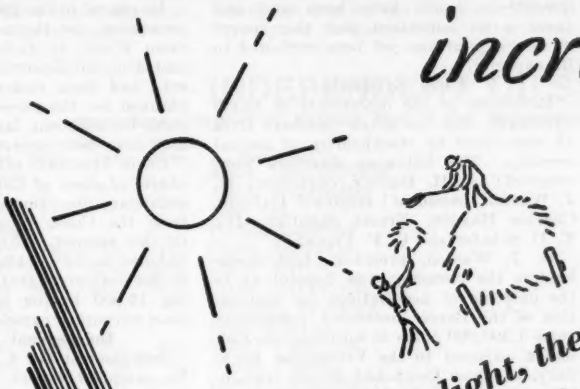

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MOTOR OIL

Oil Companies Plan New Financing

Reported Bond Flotation by Royal Dutch-Shell Interests Market. Shell Union's Expansion Plans Discussed

NEW YORK, Feb. 24.—Considerable new financing on the part of large oil companies will be witnessed within the next few months, it is reported in local banking circles. Royal Dutch-Shell is expected to float a large bond issue shortly. Amsterdam reports indicate that Royal Dutch will float an issue of 5 per cent bonds, and it is reported in local banking circles that Shell's requirements in the United States will probably involve a bond offering of about $100,000,000.

Pantepec Oil Co. of Venezuela is currently offering $1,000,000 of 7 per cent one year notes under a collateral trust indenture with the Bank of New York & Trust Co. as trustee. The security for these notes is all the class "B" stock of the company's two subsidaries and its interest in two drilling contracts.

A number of the small oil companies are reported planning new financing, this being necessitated largely by the deflation in oil prices and the need for wider markets. Some of the new financing by oil companies will be done through the issuance of new stock, either through the offering of rights to stockholders or sale to banking syndicates.

Standard Oil Co. of Indiana, to finance the acquisition of the 50 per cent interest of the Sinclair Consolidated Oil Corp. in the Sinclair Crude Oil Purchasing Co. and the Sinclair Pipe Line Co., has asked stockholders to approve an increase in capital stock from $450,000,000 to $500,000,000, the proposal to be voted on at the annual meeting March 6.

Reported pending financing by Royal Dutch-Shell has aroused particular interest, owing to the strides which the company's American affiliate, Shell Union Oil Corp., has been making in extending its "sphere of influence" in American markets. Expansion plans of the company in the United States are reported to involve the expenditure in the near future of between $150,000,000 and $200,000,000, part of which has already been expended through the acquisition of service station chains and bulk plants. Shell Union, since its organization eight years ago, has succeeded in achieving national distribution, and the company is now a factor in all marketing areas in the United States.

Bond issues will take care of the major proportion of the pending financing. This is due to the fact that bond issues are being readily absorbed. Since the break in the stock market during the closing quarter of 1929, nearly $1,000,000,000 in bonds have been sold and there is no indication that this source of new capital has yet been exploited to its capacity.

Carib Syndicate

Reduction in the directorate of Carib Syndicate, Ltd., to seven members from 11 was voted by stockholders at annual meeting. The following directors were retained: A. H. Bunker, chairman; H. J. Wasson, president; Reginald Hallady, Charles Hayden, Ernest Stauffen, Jr., E. D. Schafer and C. F. French.

H. J. Wasson, president, told stockholders the company was hopeful as to the outcome of negotiations for restoration of the Barco concession, comprising some 1,300,000 acres in northeastern Colombia adjacent to the Venezuelan boundary, in which Carib had 25 per cent interest, the remainder being held by South American Gulf Oil Co. This concession was declared forfeited by the Colombian Government on February 3, 1926, without preliminary warning. Mr. Wasson attached considerable importance to the recent election to the presidency of Colombia of Enrique Olaya Herrera, who is known to favor foreign capital.

In regard to the 29,000-acre Equatorial concession, on the north bank of Sogamoso River, in Colombia, Mr. Wasson stated no development work on this property had been undertaken and none is planned for the present until drilling results on adjacent land by other companies have been ascertained.

Carib Syndicate originally held 550,000 shares of stock of Colon Oil Corp., whose subsidiary has commenced shipment of oil from the Colon property in Venezuela. Of this amount, 525,000 shares were distributed to its stockholders in 1928. Carib has retained 8,000 shares, the remaining 17,000 having been disposed of to meet corporate expenses.

Independent Oil & Gas

Independent Oil & Gas Co. has issued its pamphlet report for year ended December 31, 1929, showing consolidated net profit of $5,882,179 after taxes, intangible drilling costs, interest, depreciation, depletion and amortization, equivalent to $4.31 a share on 1,362,295 no-par

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of New York Stock Exchange, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended February 19 Sales	High	Low	Close	Stocks—
21⅞	18	1,000	18½	18¼	18¼	Amerada Corp.
27⅛	20½	500	23	22⅜	22¾	American Republics Corp.
..	..	No sales.				Associated Oil
42⅞	36¼	4,200	34¼	38¾	39	Atlantic Refining
24¼	20½	9,800	21½	20¾	20⅞	Barnsdall Corp.
23⅞	19⅝	1,500	20½	20	20⅛	Continental Oil of Delaware
59¾	49⅛	400	54	53⅛	53⅛	General Asphalt
70½	52¼	2,900	62½	61⅛	61⅛	Houston Oil
23½	20⅜	700	20¾	20¼	20¾	Independent Oil & Gas
23¾	17¾	3,700	19¼	18⅝	19	Indian Refining
22½	21¼	700	22⅛	22⅛	22⅛	Lago Oil & Transport
9½	8⅛	1,700	8½	8⅛	8¼	Louisiana Oil Refining
..	..	No sales.				Maracaibo Oil
21¾	16⅛	2,700	17½	17⅛	17¼	Mexican Seaboard
28	24⅛	1,200	24½	24⅛	24⅛	Mid-Continent Petroleum
..	..	No sales.				Middle States Oil
..	..	No sales.				Pan American P. & T.
60¼	50½	1,700	52	51⅝	52	Pan American P. & T. "B"
..	..	No sales.				Pan American Western "B"
..	..	No sales.				Panhandle P. & R.
..	..	No sales.				Panhandle P. & R. pfd.
35	29⅛	1,000	30⅛	29¾	29¾	Phillips Petroleum
1⅜	1	1,100	1¼	1¼	1¼	Pierce Oil Corp.
3⅜	2¼	3,300	3⅜	3	3⅛	Pierce Petroleum
52¼	48	500	48½	48	48⅛	Prairie Oil & Gas
60	58	300	59	59	59	Prairie Pipe Line
9½	6½	300	7	6⅝	6⅞	Producers & Refiners
..	..	No sales.				Producers & Refiners pfd.
24⅜	21⅝	2,300	21¾	21⅝	21⅝	Pure Oil
26½	22¼	300	22⅞	22¼	22⅜	Richfield Oil
19½	16½	600	16⅞	16½	16½	Rio Grande Oil
54⅝	49⅜	16,100	50¾	49⅜	50¼	Royal Dutch, N. Y.
..	..	No sales.				Shell Transport & Trading Co.
23⅝	21⅜	1,600	21⅞	21⅜	21⅝	Shell Union Oil
28¼	22⅞	100	23⅛	23⅛	23⅛	Simms Petroleum
25¾	21⅝	6,200	22⅞	22½	22¾	Sinclair Consolidated
..	..	No sales.				Sinclair Consolidated pfd.
32¼	28⅞	2,600	29	28⅞	28⅞	Skelly Oil
61⅝	57	9,200	57⅞	57	57	Standard Oil of California
66⅞	58½	18,400	59¼	58½	58⅞	Standard Oil of New Jersey
33⅞	31	5,800	31⅞	31¼	31⅞	Standard Oil of New York
59⅜	55⅜	700	55⅝	55½	55½	Sun Oil
7⅜	5¼	1,800	5½	5¼	5½	Superior Oil Corp.
56¼	51	4,600	51⅞	51⅛	51¼	The Texas Corporation
10¾	9⅛	1,700	9½	9½	9½	Texas Pacific Coal & Oil Co.
..	..	No sales.				Tide Water Oil
90	86⅛	200	86½	86½	86½	Tide Water 5½% pfd.
13¼	10¾	5,200	11¼	10¾	11	Tide Water Associated
84	78	300	79⅝	79⅛	79⅝	Tide Water Associated pfd.
10⅛	8¼	6,000	8½	8¼	8¼	Transcontinental Oil
46¾	41½	1,100	42⅝	41¾	41¾	Union Oil of California
36¼	34	200	34⅞	34⅞	34⅞	Union Tank Car
20⅞	16⅝	2,900	19⅜	18⅞	18⅞	Warner-Quinlan
28	26	200	26¾	26⅝	26⅝	White Eagle Oil & Refining
15	11¾	300	12¼	11¾	12¼	Wilcox Oil & Gas

	Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
(sh)	922,075	N.P.	50cQ	1-31-30	37⅝	27⅝	43⅞	27½	42⅝	17½
(sh)	209,180	N.P.	.....	3-20-29	82⅛	35⅛	85	51½	64¾	12½
	$57,260,300	$25	50cQ	12-31-29	50¼	35	53⅜	37½	47¼	34½
	$50,000,000	$25	25cQ	12-16-29	131⅜	104	66⅜	50	77⅞	30
	$45,235,650	$25	50cQ	12- 7-29	35½	20¾	53	20	49⅛	20
(sh)	4,741,554	N.P.	.....	3-31-27	..	..	..	..	47⅛	18
	$20,785,400	N.P.	50cQ	.....	96¾	65	94⅞	68	94¾	42¼
	$25,000,000	$100	.....	.....	175¾	60⅛	167	79	109	26
(sh)	1,333,572	N.P.	50cQ	1-31-30	32¾	17⅝	38⅜	21¾	39⅜	17¾
	$12,307,370	$10	.....	5-31-24	12⅛	7⅝	39⅝	9	53	13⅛
(sh)	3,992,122	N.P.	.....	5- 1-27	37¾	20½	39⅛	27⅜	38⅜	16½
(sh)	1,190,063	N.P.	.....	.....	18⅛	10	19¾	9⅜	18	7
(sh)	330,000	N.P.	.....	.....	22¾	12	25½	12½	18½	5⅛
(sh)	1,276,873	N.P.	.....	12-15-20	9¼	3	73	4⅝	69⅜	9¼
(sh)	1,857,912	N.P.	50eQ	12-15-29	39⅜	25½	44½	25⅛	39⅞	22⅛
	$24,298,850	$10	.....	7- 1-23	3¾	1⅝	7⅜	2⅜	5⅛	¾
	$50,084,700	$50	.....	10-20-27	65⅞	40⅛	54⅞	38¼	69	40½
	$121,105,050	$50	.....	11-15-24	66⅜	40¼	58⅞	37⅜	69¼	40½
(sh)	400,000	N.P.	.....	1-30-27	37⅞	16¾	28⅜	15½	18½	13⅝
(sh)	199,370	N.P.	.....	.....	18⅞	8	21¾	11½	15¼	3
	$2,564,400	$100	.....	7- 2-23	83	54	108	70	76	47½
(sh)	2,406,796	N.P.	50cQ	1- 2-30	60¼	36¼	53⅞	35¼	47	24¼
	$29,622,831	$25	.....	.....	1⅛	½	5¼	½	3⅜	1
(sh)	2,500,000	N.P.	.....	.....	5½	2½	7	3½	5⅞	½
	$61,720,125	$25	50cQ*	12-31-29	55½	45⅝	68	46	65⅝	40½
	$101,250,000	$25	75cQ†	12-31-29	190	130¾	280	172	65	45
	$37,438,950	$50	.....	9-15-23	33⅞	16¾	29⅞	16	25⅞	4
	$2,845,350	$50	.....	5- 1-25	50	36⅞	49⅝	41	46¾	25½
	$75,959,250	$25	37½cQ	12- 2-29	33½	25	31⅝	19	30¾	20
	$47,964,650	$25	50cQ	11-15-29	28⅝	25⅜	56	23	49⅝	20
(sh)	1,200,000	N.P.	$2.00A	7-25-29	..	..	37½	32	42½	15
(sh)	611,303	$1.873	.....	9-13-29	54½	44¼	64	44⅝	64	43⅛
	£19,654,274	£1	$1.45	7-23-29	48⅝	40½	47⅞	41⅜	57½	40⅝
(sh)	13,000,000	N.P.	35cQ	12-31-29	31¾	24⅝	39¼	23¼	31⅜	19
	$8,060,380	$10	40cQ	12-14-29	25⅜	14¼	27¼	18⅛	40⅛	15
(sh)	5,500,000	N.P.	50cQ	1-15-30	22⅜	15	46¾	17⅜	45	21
	$16,025,250	$100	$2Q	11-15-29	104½	97	110	102½	111	103
	$27,237,750	$25	50cQ	12-16-29	37⅜	24⅛	42⅝	25	40½	28
(sh)	12,594,098	N.P.	62½cQ	12-16-19	60¾	50⅜	80	53	81⅞	51½
	$620,079,800	$25	25cQ*	12-16-29	41⅜	35⅛	59⅜	37¾	83	48
	$434,094,575	$25	40cQ	12-16-29	34⅛	29¾	44¼	28¾	48⅛	31¾
(sh)	1,297,627	N.P.	25cQ	12-16-29	34⅞	30	77	31½	86⅜	55
(sh)	2,324,938	N.P.	.....	12-20-20	..	..	..	..	24	5¼
	$211,076,650	$25	75cQ	1- 1-30	58	45	74¾	50	71⅞	50
	$8,380,340	$10	2½%A‡	12-31-29	18⅞	12	26⅝	12⅛	23⅞	9½
(sh)	2,191,759	N.P.	20cQ	12-31-29	29⅛	19	41½	19⅝	40	14
	$20,705,200	$100	$1.25Q	11-15-29	90⅛	85	100⅛	86	97½	85⅛
(sh)	4,796,158	N.P.	30cS	2-15-30	19⅛	15¾	25	14¾	23½	10
	$72,844,300	...	$1.50Q	2- 2-30	..	..	..	..	90⅞	74⅛
(sh)	3,742,029	N.P.	.....	.....	10⅜	3¾	14¾	7¼	15¼	5⅛
	$94,798,100	$25	50cQ	11- 9-29	56½	39⅝	58	42⅝	57	42⅛
	$31,061,200	$100	$1.25Q	12- 2-29	127½	94	128⅛	110	163¾	121⅞
(sh)	356,000	N.P.	50cQ	1- 2-30	34½	24½	44⅞	26	42⅞	15
(sh)	490,000	N.P.	50cQ	1-20-30	27½	20	38	20⅛	38	25
(sh)	2,400,000	N.P.	.....	5-10-28	..	..	..	..	29¾	12⅞

*Plus extra dividend of 25 cents. †Plus extra dividend of 50 cents. ‡Payable in stock. x-Ex-dividend.

In comparing highs and lows for the several years in the three tables it will be necessary to take into consideration cases where there have been splits in the stock.

shares of stock excluding the 17,000 shares in the company's treasury. This compares with net profit in 1928 (including Manhattan Oil Co. for five months) of $5,092,858 or $5.29 a share on 959,457 shares which were outstanding practically the entire year and $3.82 a share on 1,333,572 shares outstanding at the end of that year.

Petroleum Corporation

The London Stock Exchange has granted permission for dealings in the shares of the Petroleum Corp. of America.

Rio Grande Oil

Report of Rio Grande Oil Co. for year ended December 31, 1929, shows net income of $5,659,943 after taxes, depreciation, depletion and other charges, equivalent to $4.58 a share on 1,236,170 no-par shares of stock. This compares with $1,649,600 or $1.37 a share on 1,200,000 shares in 1928.

Current assets as of December 31, 1929, amounted to $6,041,957 and current liabilities of $4,017,664, comparing with $2,869,295 and $2,047,201, respectively, at close of previous year. Total net production of crude oil for 1929 was 5,055,240 bbls. compared with 1,434,835 bbls. in 1928.

Royal Dutch

Directors of Royal Dutch Petroleum Co. propose exchange of 5 per cent 50-year bonds, redeemable at any time at 102½ per cent, for the 4½ per cent priority shares, of which 28,500,000 guilders of 1,000 guilders par are now authorized and outstanding. The nominal value of the bonds will be the same as that of the priority stock.

Chesebrough Manufacturing

Chesebrough Manufacturing Co. declared an extra dividend of 50 cents and the regular quarterly dividend of $1, both payable March 31 to stock of record March 10. Three months ago the company declared an extra dividend of $1.

Royalite Oil

In connection with the recent issue of new Royalite Oil Co. stock to shareholders at $30 a share, a residue of 811 shares was left to be offered by tender. Announcement is made that this stock was sold at $60 a share, netting $30 a share to holders of fractional shares and those who failed to take up their allotment of one new share for four old shares. Shareholders interested will receive their proportion in cash.

Buckeye Pipe

Report of Buckeye Pipe Line Co. for year ended December 31, 1929, shows net income of $1,153,268 after taxes and charges, equivalent to $5.76 a share (par $50) on 200,000 shares of stock. This compares with $1,207,029 or $6.03 a share in 1928.

Indian Territory Oil

Report of Indian Territory Illuminating Oil Co. and subsidiaries for year ended October 31, 1929, shows net profit of

(Continued on Page 157)

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Members of New York Curb Market, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended February 19 Sales	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
..	..	No sales.				Amer. Con. Oilfields		$11,018,000	$5	.....	.....	2 7/16	.55	1½	.53	72c	⅛
3¼	1½	1,300	2	2	2	Amer. Maracaibo	(sh)	700,000	N.P.	.....	.....	7½	2¾	9½	3⅛	8⅝	1⅛
1⅜	1¼	200	1¼	1¼	1¼	Argo Oil	(sh)	683,971	$10	.....	.....	2¾	1	4½	2¼	5	1½
..	..	No sales.				British-American	(sh)	1,311,321	N.P.	25cQ*	1- 2-30	40	20½	55	32¾	62	7⅞
1¼	¾	2,700	1⅜	1¼	1⅜	Carib. Syndicate		$131,250	25c	.....	.....	28¼	15½	4½	3⅛	4⅞	1
33	26½	31,000	33	32⅝	32⅞	Cities Service	(sh)	24,290,359	N.P.	30cA†	1- 2-30	58¾	40¼	90⅞	54	68⅛	20
89⅞	88	900	88¾	88½	88¾	Cities Service pfd.	(sh)	1,500,000	N.P.	50cM	1- 2-30	95⅜	87	103½	94½	98¾	84
⅜	¼	300	⅜	¼	¼	Colombia Syndicate		$2,000,000	$1	.....	.....	3⅞	1⅛	3¼	.76	2	½
..	..	No sales.				Cons. Royalty		$5,000,000	$10	15cQ	10-25-29	9¾	6⅜	8⅞	6¼	11⅛	2½
6⅝	5¾	2,900	5⅞	5¾	5¾	Creole Petroleum	(sh)	5,977,973	N.P.	.....	.....	14⅞	9½	17½	9½	11¾	5⅝
⅝	¼	500	⅝	⅝	⅝	Crown Central	(sh)	578,000	N.P.	.....	.....	3	.50	3¼	.76	2½	¼
8¼	7¼	300	8½	8½	8½	Darby Petroleum	(sh)	1,019,392	N.P.	25cQ	1-15-30	12	4	33½	3¼	26	6½
5⅜	4⅝	200	4⅞	4⅞	4⅞	Derby Oil & Refining	(sh)	500,000	N.P.	.....	.....	2½	74	2¼	1	11	2
..	..	No sales.				Derby Oil & Refining pfd.	(sh)	48,500	N.P.	.....	.....	16¾	4	21⅛	7½	44	20¾
144	133	1,500	133⅞	133¼	133⅞	Gulf Oil Corp.	(sh)	4,504,921	$25	37½cQ	1- 1-30	118	86¼	165	101⅛	209	115
1½	⅞	2,400	1	⅞	⅞	Intercontinental Pet.		$5,682,000	$5	.....	.....	2½	.80	3⅜	1	2⅞	⅜
2½	1⅞	400	2	2	2	Kirby Petroleum	(sh)	750,000	N.P.	.....	.....	2¼	1⅛	3	1¼	3⅝	1¼
..	..	No sales.				Leonard Oil & Dev.		$50,000,000	$25	.....	.....	10⅞	5⅛	9⅜	5⅛	6⅛	1
22	18⅝	100	20⅞	20⅞	20⅞	Lion Oil & Refining	(sh)	250,000	N.P.	50cQ	1-31-30	27½	20	43⅞	20	38⅞	18
39⅞	34⅛	300	37½	37½	37½	Lone Star Gas	(sh)	5,000,000	N.P.	20cQ	12-31-29	59⅜	37	69⅛	48½	67⅞	28
..	..	No sales.				Magdalena Syndicate	(sh)	850,000	$1	.....	.....	2⅞	.80	1⅞	.50	1¼	¼
..	..	No sales.				Margay Oil	(sh)	160,000	N.P.	50cQ	1-10-30	52	12	48½	32	38½	14
3½	2	2,800	2½	2	2	Mexico-Ohio Oil		.....	...	.....	.....	12⅛	5	8	2¾	6⅜	2½
⅝	½	300	½	½	½	Mountain & Gulf		$4,000,000	$1	2cQ	1-15-30	1½	1	1¾	.76	1½	¼
9⅜	8	600	8⅛	8	8	Mountain Producers		$1,682,182	$10	40cQ	1- 2-30	29¼	22¾	28⅞	19½	22⅞	7
..	..	No sales.				New Bradford Oil		$1,095,291	$5	12½cQ	1-15-30	5⅞	4⅝	5⅝	4¼	5	2¼
6¼	3½	100	4¼	4¼	4¼	New Mex. & Arizona		$1,000,000	$1	.....	.....	16	9¼	11⅞	7⅛	9⅜	2¼
..	..	No sales.				North Central Texas	(sh)	400,000	N.P.	15cQ	12- 2-29	12¾	9½	14¼	8½	18½	6⅛
1⅞	1	1,800	1¾	1⅝	1⅞	Pandem	(sh)	489,875	N.P.	.....	.....	9⅜	3¼	6	2⅛	3½	½
..	..	No sales.				Pantapec Oil	(sh)	1,506,600	N.P.	.....	.....	12⅛	7	15⅝	8½	10¼	1⅞
..	..	No sales.				Pennok Oil	(sh)	150,000	N.P.	.....	.....	13½	5⅛	7¾	4⅞	7¾	4⅜
..	..	No sales.				Red Bank Oil	(sh)	250,000	N.P.	.....	.....	24⅜	7	18	4⅞	16	9⅝
3	2⅜	200	2½	2½	2½	Reiter-Foster	(sh)	388,584	N.P.	10cQ	12- 2-29	15½	3½	12⅞	4⅛	8½	1⅛
4⅜	3⅝	300	4⅛	4⅛	4⅛	Ryan Consolidated	(sh)	500,000	N.P.	.....	.....	7	4½	12	4⅛	11	3
2⅜	2	1,000	2⅛	2⅛	2⅛	Salt Creek Consolidated	(sh)	1,286,300	$10	10cQ	1- 2-30	8	5¼	7¼	5½	5⅞	1⅞
12⅜	10	500	10⅛	10⅛	10⅛	Salt Creek Producers	(sh)	1,496,859	$10	50cQ	2- 1-30	35½	27¼	35	23⅛	25⅞	9
..	..	No sales.				Savoy Oil		$750,000	$5	.....	.....	7	1¼	3½	1	2½	⅛
..	..	No sales.				Transcontinental pfd.		.....	...	.....	.....	..	..	..	..	..	..
4¼	2¼	1,400	3¼	3	3	Venezuelan Petroleum	(sh)	755,090	$5	5cQ	11-15-29	7⅜	4¼	9⅛	4¾	6½	1¾
..	..	No sales.				Woodley Petroleum		$500,000	$1	.....	.....	7	4¾	8¼	4⅞	9½	2
..	..	No sales.				"Y" Oil & Gas (new)	(sh)	100,000	N.P.	.....	.....	6	1¾	8⅜	2¼	2⅞	¼

*Including one-half per cent monthly in stock. x Ex-dividend. †Payable monthly and a monthly stock dividend of one-half per cent. ‡Cents per share.

STANDARD OIL STOCKS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Members of New York Curb Market, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended February 19 Sales	High	Low	Close	Stocks—	Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
17⅝	15	500	16	15⅞	16	Anglo-American Oil (nv)	£4,192,635	£1	.36⅞	11-27-29	21⅝	17⅞	22⅝	14⅞	17	11
..	..	No sales.				Borne Scrymser	$1,000,000	$25	$1S.A.	10-15-29	69	50	56½	44½	46½	25
69	65¼	300	65⅞	65⅞	65⅞	Buckeye Pipe Line	$10,000,000	$50	$1Q	12-14-29	60	45	76	53	74¼	55
166½	155	100	160	160	160	Chesebrough Mfg.	$3,000,000	$25	$1Q*	12-30-29	126	76½	161	117	210	130
15⅞	12¼	100	12⅞	12⅞	12⅞	Continental Oil	$36,057,840	$10	.....	12-15-27	22⅝	16¼	23	16	29	10
53	40	50	47	47	47	Cumberland Pipe Line	$1,500,000	$50	$1Q	12-15-29	137	89	114	67	75¾	40
..	..	No sales.				Eureka Pipe Line	$5,000,000	$100	$1Q	11- 1-29	68½	47	88	64⅛	70½	42
..	..	No sales.				Galena Signal Oil	$16,000,000	$100	.....	.....	13½	3½	13	4¼	6½	3
87½	78	1,400	84¼	83	84¼	Humble Oil & Refining	$74,103,300	$25	50cQ	1- 1-30	68½	54	114¾	59¼	128	74⅛
..	..	No sales.				Illinois Pipe Line	$20,000,000	$100	$10S.A.	12-16-29	182	123¾	290½	176½	340½	260
27⅜	23⅜	600	23¾	23⅜	23⅝	Imperial Oil Co., Ltd. (sh)	26,421,768	N.P.	12½cQ	12- 2-29	64¾	37¾	104	56¾	41	22
41	38⅝	600	39⅞	39⅞	39⅞	Indiana Pipe Line	$3,000,000	$10	50cQ‡	2-15-30	94½	61	91⅞	74⅜	41⅞	26
21⅞	17⅛	5,800	18¾	17⅞	18¼	International Pet. (sh)	14,247,088	N.P.	12½cQ	12-16-29	29	28¼	55	35	30⅜	15
22⅜	20⅜	100	20½	20½	20½	National Transit	$6,362,500	$12.50	25cQ‡	12-16-29	24	13½	32⅜	19⅜	25⅛	10½
..	..	No sales.				New York Transit	$1,000,000	$10	40cQ§	1-15-30	44½	31¼	75	38½	17½	10
..	..	No sales.				Northern Pipe Line	$2,000,000	$50	$2S.A.	1- 2-30	100	70	69	56½	63	41
71¼	66⅛	1,500	68	66¾	68	Ohio Oil	$60,000,000	$25	50cQ‡	12-14-29	67⅞	52	84	58½	79⅞	64⅛
22½	20	200	20¼	20⅛	20¼	Penn Mex. Fuel	$10,000,000	$25	50cQ	12-14-29	39	12	84	28	44½	20
33	31	200	32	31	32	Solar Refining	$4,000,000	$25	$1.25S.A.	12-20-29	..	..	..	..	50	29
..	..	No sales.				Southern Pipe Line	$1,000,000	$10	50cQ	.....	27¼	15½	19	15	22½	13
41⅛	37½	100	38	37¾	38	South Penn Oil (new)	$30,000,000	$25	50cQ	12-30-29	41½	35	71⅞	36¾	60¼	35⅛
..	..	No sales.				Southwest Pa. Pipe Lines	$1,750,000	$50	$1Q	10- 1-29	83	55½	102	70	70	60
54⅝	49⅞	4,900	50⅞	50½	50⅞	Standard Oil of Indiana	$348,175,069	$25	62½cQ‡	12-16-29	81½	64⅝	95⅞	70⅞	63	45
30	27⅜	200	27⅝	27⅜	27⅜	Standard Oil of Kansas	$8,000,000	$25	50cQ	12-16-29	20⅞	14⅝	37¾	15	33¾	18
37⅛	33¼	200	35⅞	35⅞	35⅞	Standard Oil of Kentucky	$25,654,516	$10	40cQ	12-16-29	130	111½	179¾	122¼	46⅞	29
48⅛	44⅛	300	48	48	48	Standard Oil of Nebraska	$4,649,225	$25	62½cQ‡	12-20-29	49½	40	54⅞	39⅞	50¼	40
88⅜	81	100	86	86	86	Standard Oil of Ohio	$14,000,000	$25	62½cQ	1- 2-30	87½	72	134	71	129	60
..	..	No sales.				Swan-Finch Co.	$861,466	$25	.....	12- 2-29	21	14½	23½	16	18	10
96⅞	88⅛	900	92	89⅜	92	Vacuum Oil Co.	$126,180,350	$25	$1Q	12-20-29	..	..	111	72	133¾	75

Note—High and low on all stocks selling this week are for 1930.
*Plus 50 cents extra. ‡Plus 25 cens extra. §Plus 10 cents extra. x Ex-dividend.

ROCKY MOUNTAIN AREA

(Continued from Page 139)

units were damaged beyond repair or completely destroyed. The plant will be rebuilt at once.

The Kinney-Coastal Oil Co.'s No. 1 Dykeman, SE SW, Section 22-3n-1w, Pilot Butte Dome, which encountered a flow of 63,000,000 feet of gas per day in the top of the Muddy at 3,370 feet, has repaired the damage caused by the blowout, killed the gas, cased the hole to the top of the sand and is now coring ahead in the gas sand. The sand shows a porosity of 30 per cent. The Texas Production Co.'s No. 1 State, SW SW, Section 36-34-95, Alkali Butte, is drilling at 2,764 feet. It had about 1,000,000 feet of gas at 2,606-14 feet.

Uinta County

The California Co.'s No. 1 Union Pacific, NE NW, Section 7-17-116, Muddy Creek, is bottomed at 4,615 feet and cleaning out at 4,610 feet.

Sweetwater County

The Mountain Fuel Supply Co.'s No. 1 Sullivan, SW SW, Section 10-16-104, South Baxter Basin, is drilling at 3,420 feet, and its No. 1 Union Pacific, Section 11-17-104, is drilling out cement at 2,563 feet. The Prairie Oil & Gas Co.'s No. 75-A, Section 11-26-90, Little Lost Soldier, is drilling at 1,830 feet in shale.

Rocky Mountain Production

Daily average pipe line runs from the various pools in the Rocky Mountain area for the week ending February 22:

	Bbls.
WYOMING	
Salt Creek	30,400
Frannie	....
Big Muddy	2,070
Oregon Basin	3,900
Dutton	....
Elk Basin	750
Ferris	40
Grass Creek	2,070
Hamilton	720
LaBarge	2,040
Lance Creek	180
Lost Soldier	3,360
Osage	670
Poison Spider	140
Rock River	2,280
Rex Lake	90
Lander	410
Simpson Ridge	....
Teapot Dome	20
Greybull	....
Total	49,140
MONTANA	
Cat Creek	1,230
Kevin-Sunburst	4,940
Pondera	2,000
Lake Basin	70
Total	8,240
COLORADO	
Moffat	1,086
Fort Collins	1,596
Florence	646
Iles	1,003
Tow Creek	377
Boulder	100
Rangley	25
Total	4,833
NEW MEXICO	
Artesia	910
Cap Rock (Maljamar)	1,001
Hogback	420
Rattlesnake	1,287
Table Mesa	114
Jal	1,384
Hobbs High	22
Getty	....
Lea	5,797
Miscellaneous	283
Total	11,218
Grand total	73,431

MONTANA

The Ohio Oil Co. has reached the top of the sand in the second well on the Dry Creek Dome, Carbon County, along the south border of Montana, and the well is flowing about 500,000 feet of gas. A string of casing is being cemented before the well will be drilled in, but it looks like a good gas well. The top of the sand was found at 4,305 feet and the gas showed as soon as the bit struck the sand. No. 1 well has string of tools in the bottom, but making around 25,000,000 feet daily. The gas is wet and during the recent cold spell No. 1 carried the Billings line without trouble. This enables the company to shut off the main trunk line from Wyoming fields in case of necessity and supply its customers in Montana from the Dry Creek well. The rock pressure on the Dry Creek wells is about 1,400 pounds. No. 1 makes about 20 barrels of gasoline daily in the drips. The gas is found in the Frontier sands.

While the Buckley Field continues to hold attention, there have been no new developments. Completion of the Cosmos well has been delayed by a faulty water shutoff and the well is standing at present at 2,457 feet. The Monalta No. 1 has practically overcome a succession of drilling troubles and should be completed within ten days. It is checking 50 feet higher structurally than the Vanalta discovery. The Mid-Continent Co., which found production in its No. 1, is ready to spud No. 2. The Dakota-Montana Oil Co., which has been very successful in the Kevin-Sunburst Field, has secured acreage in the Buckley Field and will develop the tract this summer.

No wells were completed in the Kevin-Sunburst Field. Several wells are drilling and with better weather the field should soon resume normal activity. The Texas Pacific Coal & Oil Co.'s deep test on state land is having trouble with water from below the Ellis-Madison contact. On the east side the Nepstad interests have spudded a new test, and the Dakota-Montana Oil Co. will begin work on its 1930 drilling program in the near future.

In the Pondera Field two wells have been cemented and are standing ready to drill in. These are the Teton Corp.'s No. 2 Jones and the Fulton Petroleum Co.'s No. 4 Jones on Section 8.

The joint test of the Montana Corp. and the Texas Pacific Coal & Oil Co. on the Freedom Dome, 70 miles east of Cat Creek, is drilling below 3,715 feet and should reach the first Kootenai sand within another 300 feet. Unless good production is found in the upper sands the well will be carried to the Madison lime, expected at about 5,100 feet.

WEST TEXAS FIELDS

(Continued from Page 73)

tisticians, and will no doubt soon join the list of prorated pools of Texas.

Gaines County Test

Cranfill & Reynolds Co. and Louisiana Oil Refining Co.'s No. 1 Ralph in C SW, Section 7, Block A-28, Gaines County, encountered a slight increase in gas at 4,545 feet and is drilling ahead. The former showing of oil and gas was encountered at 4,351 feet. This test lies between production in the Hobbs High area of Lee County, New Mexico, and the Deep Rock and others' No. 1 Ogden in Andrews County, consequently is drawing much attention from all operators interested in this part of the Permian Basin. If the test does not prove a producer it will lend great aid to subsurface geology in the area, and other tests may be drilled on the basis of the showings made, and the subsurface geology mapped on it and neighboring tests and producers.

Test in Tom Green

The Phillips Petroleum Co. is reported to have made a location on the A. Gulden farm in the J. Webb Survey No. 77, 1 mile north of the town of Christoval in Tom Green County, and will put down a test to 5,000 feet unless production is obtained from a higher pay formation. The test will be on a block of approximately 19,000 acres which has been core drilled by the Sun Oil Co., and geophysical study has also been made of the block. The Atlantic Oil Producing Co. has been assigned a quarter interest in the block by the Sun Oil Co. and the Phillips Petroleum Co. holds the other half interest in the block.

WEST TEXAS COMPLETIONS

Week Ending February 22

Ector County

Cosden Oil Co.'s No. 1-A University, 2,310 feet from north and 440 feet from east of Section 1, Block 35, topped the pay at 3,760 feet, was drilled to a total depth of 3,956 feet and had an initial production of 1,085 bbls. This well is pinched part of the time and is now flowing 70 bbls. daily. Landreth Production Corp.'s No. 1-S University was drilled to a total depth of 3,720 feet, topped the pay at 3,598 feet, and had an initial production of 806 bbls. flowing through tube. This well was first completed in January at a total depth of 3,662 feet.

Irion County

Cromwell and others' No. 1 Fuller, located 2,134 feet north and 631 feet west of SE cor., Section 81, Block 1, H.&T. C.R.R. Survey, was dry and abandoned at 1,503 feet.

Reagan County

Big Lake Oil Co.'s No. 176 University was drilled to a total depth of 2,964 feet, topped the pay at 2,936 feet, was plugged back to 2,940 feet and had an initial production of 5 bbls. daily.

Upton County

Humble Oil & Refining Co.'s No. 14 Ricker had an initial production of 184 bbls. in 24 hours at 2,165-2,224 feet.

Pecos County

E. L. Bateman and others' No. 1 Cordova Land Co., located 3,490 feet from north and 1,515 feet from west of Section 29, Block 1, H.&G.N.R.R. Survey, was dry and abandoned at 1,851 feet. Geyer & Frates' No. 1 White-Baker, located 2,310 feet from north and east line of Section 29, Block Z, T.C.R.R. Survey, was dry and abandoned at 2,004 feet. Skelly Oil Co.'s No. 1 Bowers, located SW cor. N half SE, Section 31, Block 16, was drilled to a total depth of 1,676 feet, topped the pay at 972 feet, topped the second pay at 1,649 feet and had an initial production of 30 bbls. Landreth Production and World Oil Co.'s No. 7-B University had an initial production of 672 bbls. daily at 1,640-1,700 feet.

PIPE LINE RUNS
February 5 to February 12
Runs Through Trunk Lines

	Last period
Atlantic P. L. Co., Port Arthur	26,000
Gulf P. L. Co. to coast via Ranger	43,199
Humble P. L. Co., Comyn, Tex.	39,278
Humble P. L. Co., Ingleside	31,347
Illinois P. L. Co., Del Rio, Tex.	44,349
Magnolia P. L. Co., De Leon, Tex.	19,960
Pasotex P. L. Co., El Paso, Tex.	13,101
Shell P. L. Co. to Healdton, Okla.	30,109
Shell P. L. Co. to Houston, Tex.	21,658
The Texas Company, Houston, Tex.	20,191
Total	289,192
Tank Car Shipment	
Big Spring P. L. Co., Big Spring	....
Humble O. & R. Co., McCamey	419
Landreth Prod. Corp., Crossett	171
Reagan County Pur. Co., McCamey	....
Thomas & Brann, Grant City	100
Orient Co., McCamey	75
American Pet. Co., Pyote	....
Southern Crude O. P. Co., Wickett	17,742
Total	18,507
Runs to West Texas Refineries	
Bluebonnett Ref. Co., Wickett	315
Burford Ref. Co., Pecos	3,783
Col.-Tex. Ref. Co., Colorado	7,000
Cosden Ref. Co., Big Spring	....
Great Western Ref. Co., Big Spring	3,411
Humble Oil & Ref. Co., McCamey	7,185
Mid-Tex Ref. Co., Midland	....
Tonkawa Ref. Co., Pyote	1,750
Big Spring Ref. Co., Big Spring	834
Richardson Ref. Co., Big Spring	3,503
Wickett Ref. Co., Pyote, Tex.	150
Total	27,931

Summary

	Last period	This period
Pipe line runs through trunk lines	284,063	289,192
Tank car shipments	14,290	18,507
Runs to West Texas Refineries	42,193	27,931
Total daily distribution	340,546	335,630
Total daily production	336,121	334,602
Daily average from storage	4,425	1,028

GASOLINE DISTRIBUTION BY WATERWAYS PLANNED

(Continued from Page 37)

citers. These generators supply current to a single 320 horsepower double-armature motor, driving a single screw at 180 revolutions per minute. The two commutators of these motors adjoin each other, giving satisfactory ventilation.

Operation of this type of tanker affords many economies. The ship may be controlled from either the pilot house or either wing of the bridge, and the movement of the vessel can also be controlled from the engine room. Upon discharge of the cargoes of these tankers, it is interesting to note, water ballast must be taken on to maintain the overhead bridge clearances.

Other oil companies have met with success in operating small tankers of this type, designed primarily for sheltered waters. Among such gasoline-movers are the Diesel-electric "J. H. Senior" owned by the Standard Oil Co. of New Jersey, the "Richlube," also Diesel-electric, owned by the Richfield Oil Co., and the Diesel-electric "General," owned by the General Petroleum Co.

River Distribution

Just as gasoline transportation via pipe lines presents a number of substantial economies over tank car distribution, in addition to insuring a much more flexible movement, so has river distribution of motor fuel insured many economies in operating costs to those companies which have already developed this type of distribution. While an adequate comparison of transport costs via tank car and motor barge is lacking at this time, oil companies which have studied the situation carefully are of the opinion that the savings and other advantages to be derived from river distribution are sufficiently ample to justify the change from tank car to tanker.

While oil companies active in the Pittsburgh area have not yet reached the point where they are willing to divulge their plans for river distribution of their products, it is known that important developments along these lines are under way. A number of steel companies active in the Pittsburgh area have been moving their export tonnages down the rivers to New Orleans, Houston and other points on the Gulf during the past few years, and the success which has attended these operations has been largely instrumental in attracting the interest of oil men. The Carnegie Steel Co., said to be the largest single user of the rivers, moved close to 120,000 tons of steel and steel products down the Ohio, in 12 large tows, during 1929, for distribution through the company's terminal at Houston and other points adjacent to the Gulf. Jones & Laughlin Steel Corp., which was a pioneer in the large-scale utilization of the rivers, is currently shipping two $1,000,000 tows per month, with other steel companies doing likewise on a smaller scale. Considerable steel destined for the Pacific Coast, as well as foreign markets, moves out in this manner.

Pittsburgh As Seaport

Pittsburgh, alert to regain its status as a virtual seaport, has important plans on foot for hastening river development work, interest in this direction having been stimulated by completion last year of the canalization of the Ohio, linking Pittsburgh directly, in a commercial way, with the Mississippi. The city of Pittsburgh will construct a city terminal on the north bank of the Ohio River, west of the Manchester Bridge. Development of another site, at Hays Station on the Monongahela, is also under consideration, it is understood. The Manchester terminal will consist of a warehouse, wharfage, floats, derricks, truckage and escalator service for small packaged freight. The terminal will be expanded as fast as the growth of river traffic demands. C. M. Reppert, chief city engineer, has studied the terminals developed by Mississippi River cities, and has also inspected at first hand the system of river transportation in Germany.

President Hoover, in his annual message to Congress last December, expressed himself as confident of early development of the entire Mississippi River Basin. His message pointed out that the increase in the annual Rivers and Harbors appropriation from $50,000,000 to $55,000,000, together with the completion of the Ohio River canalization and consequent release of funds, indicated that from $25,000,000 to $30,000,000 would be available each year for the Mississippi River system, and should result in its early completion.

Standard Oil Co. of Pennsylvania (subsidiary of the Standard Oil Co. of New Jersey) and the A. M. Byers Co. already have terminals on the river or under construction in Pittsburgh, and other large companies are also expected to construct their own wharfage here.

Congressmen representing all of western Pennsylvania recently petitioned the Rivers and Harbors Committee to consider favorably not only a survey of extension of canal projects up the Beaver, Shenango and Mahoning Rivers to

Youngstown and Warren, but further dredging of the Allegheny River, which latter the War Department has already favorably reported. The Pennsylvania congressmen also asked extension of navigation on the Youghiogheny and a survey to ascertain the costs of opening for navigation the Kiskiminetas and Conemaugh Rivers towards Johnstown, the latter projects being designed to open up enormous coal reserves.

Territorial Lines Lost

Territorial lines, which have largely been lost sight of in marketing expansion in East Coast territory during the past several years, will be still further done away with when oil companies' programs contemplating water distribution are fully developed. Atlantic Refining and Standard of New Jersey are now thoroughtly intermingled in their marketing territories, and expansion of river distribution will aggravate this situation. In addition, the utilization of river transportation in a large way will undoubtedly bring other companies into this area as well.

Pittsburgh oil interests believe that within a comparatively few years this city will assume its place as one of the leading petroleum refining and distributing cities in the United States. Numerous reports have been heard relative to new refinery construction in this area, but in view of the difficulty of disposing of fuel oil production and unsettled conditions in the petroleum industry generally, it is not believed that any important refinery construction will be witnessed. One direct result of the expansion of river transportation, however, will be a widening of "home" markets for Pennsylvania gasoline and other refined products, and keener competition for the large integrated units to meet from the smaller refining interests in this State.

Several of the larger eastern companies are expected to have fleets of river tankers in service by the end of 1930, and it is probable that tanker construction activities will be continued in a large way well into 1930. A number of companies are credited with plans for opening up inland waterway distributing facilities, and it is probable that the close of the current year will witness a number of these projects well under way. In fact, reports here of barge and river tanker construction now under way would indicate that a number of these vessels will be plying the waterways in this section of the country by late summer.

"Meeting Point" on River

Just how far southward refiners in this area will be able to ship in competition with Group 3 and Gulf refiners is still a matter of conjecture, but it is probable that transportation costs will determine a definite "meeting point" along the river, beyond which neither side will be able to project its marketing activities, save at the expense of price cutting. Distribution of a number of Pennsylvania products, not the least of which is high-grade lubricating oil, will be materially benefited by the development of river transportation, however, and it is probable that Pennsylvania lub oil refiners will be able in this manner to balance the distribution of their products to the point where they will no longer be as dependent upon the export market as they have been for many years past.

In conjunction with the building up of river tanker fleets, a number of short gasoline pipe line projects are reported under consideration, but these lines, it is felt here, will not develop until the river movement is well established, at which time some interests may find it advisable to construct branch lines reaching river points, or perhaps construct short lines hooking up nearby refining areas with points where refined products may be profitably loaded for river distribution.

BERNARD J. HAUSFELD DEAD

Bernard J. Hausfeld, advertising manager of the Lunkenheimer Co., Cincinnati, Ohio, died Tuesday, February 18.

BRADFORD-ALLEGANY HAS GREAT FUTURE

(Continued from Page 42)

reality is the basis for abandonment of wells in actual operation.

Increasing Recovery

The results of all of the recent improvements in the technology of water flooding have had a material effect upon the efficiency of water flooding operations, with a consequent increase in the recovery of oil. One of the most notable recent improvements in intensive development is "delayed drilling," which may have an important effect upon future developments in these fields.

Delayed drilling was first tried in an area in the Allegany field, where a previous five-spot flood had yielded very unsatisfactory results. A core of the sand from this area conclusively proved why this flood was not giving the results that were anticipated. The water was moving through the highly permeable 20 to 25 per cent porosity sand without affecting the lower porosity but equally well saturated pay in the upper part of the sand.

The problem thus encountered was to try to develop a method for making the water move through the beds of low permeability. It seemed impractical to flood both types of sand separately so it was decided to drill an experimental five-spot which would not be in any way affected by the first flood, and to delay the drilling of the oil wells for a period after the water had been let into the sand, which was to be determined from the analysis of another core.

The idea of delaying the drilling of the oil wells in a five-spot flood is based upon the fact that the sand body in the five-spot square possesses a definite and fixed capacity to hold fluid. As long as a constant pressure is maintained on the sand, each individual bed of the sand body will absorb water in proportion to their relative permeability. Experimental investigations have shown that the capacity for penetration is not directly proportional to the pressure; i.e., as the pressure is increased there is not a constant and proportional increase in water input but rather as the pressure is increased the rate of input increases to a larger extent. In a sand, such as the one in which delayed drilling was first tried, if the pressure is increased to the point where the lower porosity sand will be flooded within a reasonable period of time, the high porosity sand will take so much water and will flood so much faster that it will soon become uneconomical to handle the large volume of water coming into the producing well so that it must be abandoned before the effects of the flood moving through the tighter sand will be noticed. If, however, the high porosity pay in the lower part of the sand were completely saturated; that is, its capacity to hold fliud attained, and if the intake wells were forced to continue taking water by the application of additional pressure, the water would obviously have to start moving through the lower porosity sand.

The results from this first experiment have been most gratifying. Not only was it found possible to saturate the sand with fluid to the point where it was impossible to put any more water into the sand, but also the production of the delayed five-spot well clearly shows, in comparison with the results obtained from the first five-spot, that the experiment had accomplished its purpose in forcing a more uniform flooding action throughout the entire sand body. An analysis of the results obtained from them is given in Table No. 2.

This first delayed flood has, of course, not yet reached a point where the ultimate recovery per acre can be exactly calculated. It is possible that it may not produce the oil indicated from the cores, but even if this recovery is not attained the success of the experiment is assured for a previously unsatisfactory property has already been changed into a very profitable investment.

The most obvious application for delayed drilling is upon properties where the porosity of the sand is decidedly variable. Under such condtions, the results from this one field experiment indicate that an increase in recovery of over 100 per cent may be safely anticipated. Studies of cores taken in watered-out territory show that even in fairly uniform sands, flooding action is far from efficient and it is the writer's opinion that delayed drilling can be used to advantage under almost any condition, although there is little data to substantiate this idea.

The increased recovery that may be expected from delayed drilling is not its only advantage. Operating costs should be reduced, for the productive life of a delayed well will probably be much shorter than an ordinary five-spot well. In addition, it seems possible that delayed drilling will afford a control over production, which is impossible under the present system of development, where the oil is pumped as fast as it comes into the hole. There seems to be no necessity for drilling the oil well immediately after the sand has been completely saturated, if market conditions are not favorable, and this potential production could be securely held until a more opportune time when it could be made almost immediately available with a material increase in profit to the producer.

Delayed drilling presents certain operating problems which are not encountered in ordinary intensive development. All old wells must be plugged in order to prevent any relief in pressure and, if the flood is drilled along a property line, arrangements must be made to delay the drilling of offest wells. It seems highly important that a uniform input of water be maintained through each intake well for if the oil is not concentrated in the center of the five-spot it is questionable whether it can all be fully recovered. It should be appreciated that the production curve of delayed wells resembles the production decline curve of wells in a new field very closely and, in consequence, a delayed flood should be equipped with the best material and machinery and sufficient tankage provided to care for a daily production far in excess of the production that might be expected from an ordinary flood.

Conclusion

It is rather hard to fully appreciate the effect of water flooding upon the Bradford and Allegany fields. Prior to the general application of water flooding, properties were sold on a strictly production basis regardless of their acreage or even for their junk value. The value of the Bradford and Allegany fields, based upon present day prices for acreage can be safely estimated at $350,000,000. Water flooding has established a reserve of approximately 600,000,000 bbls. of recoverable oil in these fields, which would never have been obtained by natural methods of production. At the rate of their present production a future life of 50 years seems assured. Each increase in the efficiency of water flooding will have a material effect on prolonging the life of these fields by making more oil available to meet the demand for Pennsylvania crude.

The water flooding of oil sands is by no means restricted to the Bradford and Allegany fields. Experimental water floods are in operation in many other fields in Pennsylvania with variable, but in general, rather encouraging results. There are undoubtedly many sands in the Appalachian fields that possess characteristics that would adapt them to water flooding and in consequence a much wider application of this method for increasing oil recovery may be expected in the future.

REPORTS SUMMARIZED ON UNIT OPERATION

(Continued from Page 39)

ment gas wells are permitted to flow until they change to oil wells.

In the Persian Pool oil and gas zones are both owned by the same interest, whereas in the American pool above described some operators owned only gas while others owned oil. Under the competitive drainage system no method has been evolved whereby the gas-well owner is compensated for deferring extraction of his gas. That, under competitive development, would be difficult to adjust, whereas under unit operation no such problem arises.

These two pools illustrate the comparative disadvantages under which the United States petroleum industry with its competitive extraction methods is competing in world markets with the output of foreign fields. They are not offered as strictly parallel cases. Reservoir conditions differ; but much American oil is being produced, and has been produced, under conditions closely comparable to the American pool above described, whereas a greater part of foreign oil is produced from large blocks with the competitive development feature either absent or very materially reduced.

Compulsory vs. Voluntary Unitization

Most students of the industry are in agreement that the consumer, the individual operator, the individual royalty owner, and the general public, as well as the labor employed would, each and all, be greatly benefited if individual oil pools were operated as units; but general adoption of the practice in the United States has been delayed because information as to its advantages has been lacking and satisfactory means have not been developed to bring about consolidation.

Unanimous agreement on details of consolidation by parties entitled to drill into a common pool is so difficult to procure and yet unanimous action is so desirable in unit operation that advocates of legislation to enforce unit operation have not been lacking. However, taking one property from an individual and arbitrarily substituting another therefor without his consent is a procedure difficult to contrive under American law, even if it is obvious that consolidation would be in the public interest and is being done at the request of a majority interested in the single pool. This is true notwithstanding it may be apparent that the one who refuses to co-operate is prompted solely by the hope of extracting more of the products from the common pool than underlie his own land.

The danger is that if the industry does not aggressively undertake those things within its control, operators, seeking relief from present conditions and being unable or unwilling to await the slower processes of constructive action through their own efforts, will appeal to government for help and burden the industry with legislative enactments depriving it of that freedom of action it now enjoys and can retain if it shows a disposition to correct its own problems. The movement should be gradual and flexible so that mistakes may be eliminated as each step leads to the next one.

When the complications of compulsory unitization are faced, voluntary unitization, by comparison, appears simple. It is altogether in harmony with American conceptions of property rights, but its successful and general adoption is dependent upon a more widespread understanding of the issues involved.

To assist in bringing about that understanding is the basis on which the American Institute of Mining and Metallurgical Engineers is justified in making this general study of unit operation. With its international membership it has long been a forum for the discussion of engineering methods that may be developed to the common good. Its established position and the character of its personnel should help to inspire confidence in its findings and recommendations. Leaders of the petroleum industry entrusted with the duty of bringing about stabilizations have invited it to help in that undertaking and to assist in compiling information. A handbook on unit operation is being prepared by the Mid-Continent Oil and Gas Association, to which this division is asked to make contributions of material.

When the consuming public, the oil producer, the royalty owner, and the officials of government—legislative, judicial and executive—all understand more clearly the issues at stake, and the machinery and methods of consolidation are

such as enlist the confidence of all these parties, it is to be expected less difficulty will be found in enlisting co-operation. "There is nothing on earth more powerful than an idea when its hour has come."

As an ultimate ideal all the competing ownerships that will drain from the common reservoir should consolidate into a single blanket ownership—the competing leases into a blanket lease and the competing royalties into a blanket royalty—all of which would be entitled to a like percentage in kind of the product extracted from the pool as the individual property contributes in value to the aggregate value of the unit. The purpose of the consolidation would be more economic extraction and better adaptation to the law of supply and demand. One hundred per cent consolidation, however, could be expected only as the result of many and protracted efforts. Fifty per cent, sixty per cent and seventy per cent consolidations with machinery that would enable ready acceptances of the remaining percentage if, as, and when they become desirous of joining the consolidation, should be regarded as satisfactory progress in the early stages of the movement.

While there are no means by which an individual may be required to join a unitization project, yet there is adequate precedent, and also justification, for restraining him from operating his property so as to injure the property of his neighbor. If that principle were strictly imposed, much of the advantage would be taken from the operator who will not join his neighbors in unit operation. He who insists upon his pound of flesh should have it, but he should be required to exercise care in taking it. Under those circumstances, unit operation would be as desirable to him as to his co-operating neighbor. The law of oil and gas was influenced in its development by analogy with the law of wild animals. Like wild animals, they must be captured before ownership in them becomes vested. However, to protect wild animals from wasteful slaughter and final extinction, as well as to equalize opportunities to acquire them, specific regulations covering their taking are imposed by law upon the hunter. Unless operators privileged to drill into a common pool and extract the products therefrom can agree with each other as to the rules of capture, the state may be compelled to impose laws of capture as it has done for wild animals. The alternative to this unwelcome condition is voluntary agreement between the owners.

Parties to Be Benefited

The parties who would be benefited by the general adoption of unit operation and the manner in which they would be benefited are given below. The advantages are too numerous to permit individual comment. They can only be listed with a few general remarks. Perhaps the most widespread erroneous conception regarding unit operation is that it is monopolistic in tendency and will eliminate the small company and individual operator. As a matter of fact its influence would be the exact reverse of that indicated.

Competitive drainage makes vast aggregations of capital necessary in one organization in order to reach out constantly from point to point for a crude supply. If. however, methods of development become such that compact deposits of crude can be proved and made available to be drawn upon as needed over a period of years, small refining and marketing companies owning or holding interests in one or more such units will have little necessity, and therefore less tendency, to consolidate with others. Many complete small organizations will be developed rather than a few vast ones. Unit operation will, of course, be likewise advantageous to the large companies in that it will also give them dependable crude supplies; but it will remove much of the incentive for the large companies to consolidate with other large companies and become still larger. It is desirable to the large company as it is to the small company, but not nearly so necessary.

Neither will unit operation mean the passing of the small producer. An interest in a small unit that an individual operates for himself and a few partners gives to the small producer an opportunity to survive that he cannot possibly have if he attempts to compete under the old wasteful competitive type of development to which he is accustomed. His survival is dependent upon adjusting himself to new conditions.

General adoption of unit operation would give to each party the following advantages:

Consumer

1. Greater assurance of permanent and stabilized supply.
2. Receipt of products over a period of years at lower average price.
3. Greater assurance of freedom from monopolistic control.

Producer

1. Less capital investment required.
2. Lower development cost.
3. Lower operating cost.
4. Products would be made more responsive to the producer's needs.
5. Increase acre oil yield.
6. Increased gas value.
7. Stabilized business.
8. An investment more readily salable.
9. More actual control over his business.
10. More dependable crude supply for the other branches of his business.
11. Saving on plant capacity.
12. Saving on pipe lines and storage tanks.

Royalty Owner

1. Stabilized crude price structure.
2. Increased acre yield.
3. Increased gas income value.
4. Stabilized business and stabilized income.
5. Reduced risk.
6. An interest more readily salable.
7. A property that is better collateral.

General Public Welfare

1. A great industry better stabilized.
2. Stabilized labor conditions in the industry.
3. Permanent neighborhood industries on account of steady gas-fuel supply.
4. Permanent communities.
5. An assured domestic oil supply for national defense.
6. A longer period of dependable domestic oil supply for commercial and industrial purposes.
7. Reduced speculative spirit.
8. Reduced necessity for vast oil organizations.
9. Reduced monopolistic tendencies.
10. Government freed from need of supervising the oil business.
11. Increased opportunity for small complete business.

Objections to Unit Operation

Objections urged against unit operation generally fall within the three following classifications:

1. Fear that it violates antitrust laws.
2. Contention that it reduces personal control of property.
3. Fear that it would delay income from property.

A better understanding of unit operation is causing the first objection to disappear. One single unit produces much less oil than the average large company controls. If these units are operated independently of each other there will be real but not destructive competition. The law of supply and demand can then operate, which it cannot do under competitive extraction. If, however, a great number of these units are tied together by interlocking directorates to the extent that, in effect, they would be under one control, justification would exist for the fear of antitrust law violation; but a condition of interlocking directorates between the units is quite another matter than the one under consideration. It has no inherent connection with unit operation. It can and should be avoided.

The second objection is more in form than in substance. Competitive drainage methods permit the superintendent of the company that owns the individual 80-acre tract to determine a few relatively unimportant matters about operating the tract, such as the character of roads he shall build or the type of boilers or rigs he shall use, but it does not permit him to determine when and how many wells he shall drill, how much oil he shall produce, and when he shall produce it. These more important matters are determined by that operator in the pool with least vision. All others drawing from the common reservoir must accommodate their pace to the one he sets. Under unit operation each participating owner would have a vote in determining these matters of most importance. The best judgment of the pool would prevail in the common councils as against the poorest judgment, operating alone, under the competitive drainage system.

The third objection would be subject to determination and could be provided for in the consolidation agreement. Some owners would prefer to delay extraction to satisfy later needs, or for better market conditions, whereas others would prefer immediate extraction. Trading arrangements could be made among stockholders in a unit operation that would enable the desires of each to be taken care of in accordance with his daily or monthly needs, provided of course such trading arrangements came within the accepted proved reserve estimate.

The greatest deterrent to the adoption of unit operation is the customary reluctance human beings experience in breaking away from old habits and practices and adopting new ones. Individuals can do that as individuals, but difficulty is encountered in persuading a great number of individuals to do it at one and the same time. No serious objection to unit operation has been found but it requires a degree of concerted action difficult to obtain. The rapidity of its general adoption will depend upon educational processes and economic pressure.

Method of Unitization

This study has discovered a definite trend toward unitization with much sympathy for it and many embryonic units already in existence, but their developments have not progressed to the point where results that show their full significance can be tabulated. Neither has the movement progressed to the point where any single method of unitization has been evolved that is accepted even by its authors as the one correct method to bring about unit operation. Each attempt is admittedly imperfect and incomplete and represents an independent experimental groping toward, rather than an arrival at, the method which will serve as a standard for future efforts. This is said notwithstanding each of these attempts is much in advance of the unorganized competitive style of development, and many already show substantial economic rewards.

While no complete unitization system that may be used as a standard has been discovered by the search made in this study, yet certain principles have been suggested that appear worthy of consideration, and which if observed might smooth the way to more rapid adoption of unit operation. Further experience might prove many of these impracticable but they are believed to reflect the present major sentiment on the movement. These observations are as follows:

General

1. The movement should be promoted through education and persuasion rather than through direct compulsion, but on the other hand those who persist in operating their properties on a competitive extraction basis might well be restrained from so operating them as to interfere with the proper and reasonable rights of other operators who are privileged to drill into the common reservoir.

2. The program of education should be designed to reach not the producer alone, but also the royalty owner, the consumer, the general public, and government officials—executive, legislative, and judicial—to the end that there will be developed an intelligent, well-informed public opinion.

3. Judicially defined correlative rights between owners privileged to extract products from a common reservoir should be reviewed by courts in light of late scientific knowledge respecting the relationship and function of oil, gas and water in the common reservoir, in order that the injury any one operator can do all others by his method of taking might be more clearly defined and his duty determined.

Specific—For Each Project

1. The ultimate ideal would be that the competing ownerships that will drain from the common reservoir should be consolidated into a single blanket ownership—the leases into a blanket lease and the royalties into a blanket royalty, but early efforts can be no more than approaches toward that ideal.

2. The consolidations should be made on an appraisal basis, but provision might be made for later adjustments if immediate determination of final ratios were found impossible.

3. The management should be democratic in form with minorities protected by right of appeal.

4. Each unitization project should be specially designed to suit the peculiar needs of the case in hand rather than attempt to apply some standard method developed elsewhere.

5. Initiation of a unitization project should be through progressive steps with complete freedom of acceptance or rejection on the part of any owner until after the picture is set up and each owner knows the relative rate of exchange for his property and the character of management under which the unit will be operated.

6. The consolidation should be a continuing process, including in the beginning those who are ready, but making provision whereby additional owners in the common pool may be accepted when, if, and as they are ready, with rate of exchange, of course, being adjusted to relative values as of date of exchange.

7. Very general principles only should be included in the contract setting up the unit, but it should make provision for a continuing board of directors with wide discretionary powers.

8. Products in proportion to shares held should be delivered to the respective share owners at cost with flexible arrangement permitting each owner to take products if, as, and when needed, within proper margin of safety.

In any attempt to summarize the status of unit operation one would naturally like to give credit to those responsible for bringing the movement to its present position. However, controversy over methods of application that characterized the movement in its early stages, as distinguished from constructive discussion, have not yet completely disappeared. So long as that condition exists there can be no proper evaluation of the relative influences various individuals have exercised on that movement. For that reason the authors reluctantly defer any discussion of that aspect, leaving it for some later historian to evaluate.

FIRST AID CLASSES

OIL CITY, Pa., Feb. 22.—First aid classes are being regularly held in the Pennsylvania refineries among member companies of the National Petroleum Association. At present, H. R. Burdelsky, of the United States Bureau of Mines, is here this week instructing the employes of the Pennzoil Refining Co. and the Empire Oil Corp. Employes of the Independent Refining Co. who have not received previous instructions will also attend the classes at the Pennzoil plant during this week. Eighty-five employes of the Independent refinery have received certificates from the Government having completed the training course.

DEATH OF W. M. GRAHAM

LOS ANGELES, Calif., Feb. 24.—William Miller Graham, retired oil operator who came to California several years ago from Pittsburgh, Pa., died here Friday night, and the funeral was held today.

Mr. Graham was well known in the Oklahoma field where he operated on a large scale with a partner under the firm name of Graham & Bird. Their acreage and production was largely in the Osage nation.

Mrs. Graham, one son and one daughter survive him.

SIDELIGHTS ON RECENT CUTS IN CRUDE PRICE

(Continued from Page 42)

Texas, with an enormous potential was allowed to produce 138,285 bbls. per day and the week before 141,440 bbls. per day. If this field had been cut 30,000 bbls. per day, or allowed to produce 100,000 bbls. a day the overproduction situation would then be up to the operators in the Gulf Coast region where there has been no attempt at cutting down output in a steadily growing producing division.

Steady Drain on Stocks

There was a withdrawal of about 900,000 bbls. a day from the stocks of Oklahoma and Kansas crude in the month of January. In February the withdrawals have fluctuated between 20,000 and 50,000 bbls. per day, according to the best information obtainable. The demand for Oklahoma and Kansas crude at this time is said to be 775,000 bbls. per day. Last week the two states produced an average of 756,000 bbls. per day.

The spirit of Oklahoma operators is to keep production equal to or below demand. The only way they can hope to obtain an upward readjustment of prices is to keep surplus oil in the ground until the demand calls for higher prices. No trouble is anticipated in keeping production curtailed in either Kansas or Oklahoma throughout the winter.

Big Cut in Values

It is estimated that the loss in value of the crude oil produced in Oklahoma as of February 15 was $172,532.11 per day and of Kansas crude $31,948.95 per day. This is based on a combined production of 742,566 bbls. in the two states. It represents a total decline in value of $204,481.06 per day or 27.5 cents per barrel, which was a shade over the decrease in value of 37 gravity oil.

Based on the weighted average gravity by pool the following table will indicate the quantity of oil of each degree that was being produced in Oklahoma and Kansas on February 15:

Degree of Gravity	Production bbls. Oklahoma	Kansas
Below 25	2,785	13
25-25.9	....	....
26-26.9	185	....
27-27.9	....	....
28-28.9	1,514	12,200
29-29.9	2,520	....
30-30.9	1,220	....
31-31.9	11,825	....
32-32.9	53,395	2,114
33-33.9	740	5,132
34-34.9	13,995	12,830
35-35.9	78,800	2,240
36-36.9	5,712	7,690
37-37.9	99,574	6,432
38-38.9	263,706	3,586
39-39.9	46,994	16,172
40-40.9	15,158	3,095
41-41.9	1,589	10,552
42-42.9	16,581	27,757
43-43.9	11,400	360
44 and above	4,700	....
Total	632,393	110,173

Wide Variation in Gravity

Oil is produced in Oklahoma running all the way from 21 degrees upward to 44 and above. The above table does not give any 25 or 27 gravity crude, yet there is a small quantity of it produced in some pools where also high gravity oil is produced. The low gravity crude together with the high gravity crude is given in bulk as a weighted average. This applies for example to the Duncan district where there are 11 grades of crude oil ranging from 29 to 40 degrees with a weighted average of 36 degrees. The Bristow-Slick area varies from 30 to 41, with a weighted average of 35 degrees. Robberson runs from 19 up to 26 degrees, with a weighted average of 23 degrees, and so on. For the purpose of this article only the weighted average of each of the fields indicated is given. However the production by gravity is figured the production of Oklahoma at this time averages a shade over 37 degrees.

Weighted averages are also given in reckoning the losses in value of the crude oil produced in Kansas as occasioned by the recent cut in prices. Oil is produced in Kansas all the way from 24 up to above 50 degrees but the weighted average is a shade under 38 degrees. The combined production of Kansas and Oklahoma represents oil of 37 degrees plus as a bulk or weighted average.

The accompanying tables give the declines in values in the principal pools of the two states.

DECLINE IN VALUES OF CRUDE OIL PRODUCED IN OKLAHOMA

	Weighted average gravity	New posted prices (average)	Decline per bbl.	Daily production bbls.	Decrease in value
Allen	32	$1.08	$0.17	23,400	$3,978.00
Asher	40	1.32	.33	2,520	831.60
Barnes	39	1.29	.31	127	39.37
Beebe	35	1.17	.23	2,700	621.00
Billings	42	1.38	.37	90	33.30
Blackwell	40	1.32	.33	2,620	864.60
Braman	42	1.38	.37	3,610	1,335.70
Bristow-Slick	35	1.17	.23	17,200	3,956.00
Brock	36	1.20	.25	587	146.75
Burbank	38	1.26	.29	16,700	4,843.00
Cement	34	1.14	.21	2,010	422.10
Cleveland	34	1.14	.21	2,600	546.00
Comanche	39	1.29	.31	1,105	342.55
Cromwell	38	1.26	.29	7,277	2,110.33
Cushing	35	1.17	.23	14,500	3,335.00
Davenport	42	1.38	.37	1,761	651.57
Duncan	36	1.20	.25	5,125	1,281.25
Fox	30	.96	.19	1,220	231.80
Garber	44	1.44	.41	4,700	1,927.00
Graham	32	1.08	.17	2,801	476.17
Graham North	21	.60	.30	905	271.50
Healdton	31	1.02	.18	11,825	2,128.50
Hewitt	34	1.14	.21	7,400	2,294.00
Holdenville miscellaneous	38	1.26	.29	804	233.16
Hubbard	39	1.29	.31	1,675	519.25
Jennings	37	1.23	.27	3,200	864.00
Kilgore	26	.72	.23	185	42.55
Knox	37	1.23	.27	3,230	872.10
Loco	28	.84	.21	840	176.40
Madill	38	1.26	.29	530	153.70
Marshall	42	1.38	.37	10,630	3,933.10
Konawa	38	1.26	.29	2,317	671.93
Masham	39	$1.29	$0.31	154	$47.74
Mehan	39	1.29	.31	263	81.53
Mervine	40	1.32	.33	225	74.25
Milroy	28	.84	.21	674	141.54
Okemah	38	1.26	.29	361	104.69
Oklahoma City	37	1.23	.27	84,498	22,814.46
Okmulgee	38	1.26	.29	14,900	4,321.00
Osage	35	1.17	.23	26,400	6,072.00
Otstot	43	1.41	.39	790	308.10
Papoose	38	1.26	.29	2,846	854.34
Pearson	37	1.23	.27	688	185.76
Perry	43	1.41	.39	1,010	393.90
Ponca City	38	1.26	.29	590	171.10
Ripley	40	1.32	.33	241	79.53
Robberson	23	.60	.30	1,880	564.00
Sand Springs	38	1.26	.29	1,100	319.00
Sasakwa	40	1.32	.33	9,552	3,152.16
Seay	34	1.14	.21	1,985	416.85
Seminole	38	1.26	.29	215,800	84,162.00
Shamrock East	33	1.11	.19	740	140.60
Sholem Alechem	32	1.08	.17	13,744	2,336.48
St. Louis	39	1.29	.31	42,750	13,252.50
Stroud	41	1.35	.35	875	306.25
Stroud North	41	1.35	.35	189	66.15
Thomas	41	1.35	.35	525	183.75
Tonkawa	43	1.41	.39	9,600	3,744.00
Two South-Six West	32	1.08	.17	850	144.50
Walters	29	.90	.20	2,520	504.00
Washington-Nowata-Rogers	32	1.08	.17	12,600	2,142.00
Watchorn	42	1.38	.37	490	181.30
Weleetka	39	1.29	.31	920	285.20
Wetumka	38	1.26	.29	35	10.15
Wewoka	37	1.23	.27	4,058	1,095.66
Yale-Meramec-Ingalls	37	1.23	.27	3,900	1,053.00
Yeager	38	1.26	.29	446	129.34
Others	35	1.17	.23	18,000	4,140.00
Total Oklahoma				632,393	172,532.11

DECLINE IN VALUE OF CRUDE OIL PRODUCED IN KANSAS

	Weighted average gravity	New posted prices (average)	Decline per bbl.	Daily production bbls.	Decrease in value
Florence-Urshell	33	$1.11	$0.19	492	$93.48
Covert-Sellers	33	1.11	.19	475	90.25
Peabody	34	1.14	.21	1,300	273.00
Sedgwick County	42	1.38	.37	23,400	8,658.00
Hillsboro	34	1.14	.21	920	193.20
Lost Springs	38	1.26	.29	596	172.84
Elbing	34	1.14	.21	1,950	409.50
North Augusta	32	1.08	.17	846	143.82
South Augusta	32	1.08	.17	1,160	197.20
Eldorado	34	1.14	.21	6,910	1,451.10
Fox Bush	39	1.29	.31	937	290.47
Towanda	33	1.11	.19	1,950	370.50
Sluss	38	1.26	.29	225	65.25
Weaver Leon	36	1.20	.25	4,690	1,172.50
Smock	37	1.23	.27	200	54.00
Nuttle-Koogler	33	1.11	.19	2,215	420.85
Robinson	35	1.17	.23	840	193.20
Wilson-Dunkle	35	1.17	.23	1,400	322.00
Benton	41	1.35	.35	77	26.95
Potwin	43	1.41	.39	360	140.40
Phillip-Hazlett	42	1.38	.37	57	21.09
Young-Keighley	40	1.32	.33	560	184.80
Eastern Butler	38	1.26	.29	690	200.10
Douglass	32	1.08	.17	108	18.36
Sallyards	38	1.26	.29	1,025	297.25
Pixley-Teeter	42	1.38	.37	4,300	1,591.00
Virgil	39	1.29	.31	5,900	1,829.00
Seeley-Westcott	41	1.35	.35	8,000	2,800.00
Thrall-Burkett	41	1.35	.35	1,260	441.00
Polhamus-Agard	40	1.32	.33	740	244.20
Greenwood-Misc.	38	1.26	.29	785	227.65
Madison	40	1.32	.33	800	264.00
Harvey	24	.60	.30	13	3.90
Oxford, Cowley County	37	1.23	.27	400	108.00
Graham	38	1.26	.29	265	76.85
Rainbow Bend	41	1.35	.35	1,215	425.25
Winfield-New Salem	39	1.29	.31	2,300	713.00
Eastman	37	1.23	.27	330	89.10
Rock	37	1.23	.27	152	41.04
Udall-Clark	39	1.29	.31	135	41.85
Cowley-Misc.	40	1.32	.33	1,000	330.00
Churchill	37	1.23	.27	4,700	1,269.00
Oxford City	36	1.20	.25	3,000	750.00
Elk County—west half	34	1.14	.21	1,750	367.50
Russell	39	1.29	.31	3,900	1,209.00
Rice	37	1.23	.27	650	175.50
McPherson County	39	1.29	.31	3,000	930.00
Others	28	.84	.21	12,200	2,562.00
Total				110.173	$31,948.95

PETROLEUM COMPANIES PLAN NEW FINANCING

(Continued from Page 153)

$3,033,280, after interest, depreciation, depletion, taxes, etc., equivalent to 39 cents a share (par $1) on 7,752,842 shares of stock.

Consolidated income account for year ended October 31, 1929, follows: Gross earnings, $11,195,270; other income, $193,297; total income, $11,388,567; expenses, $3,374,250; interest, $1,293,043; depreciation, depletion, etc., $3,687,994; net profit, $3,033,280; dividends, $212,701; surplus, $2,820,579.

Consolidated balance sheet as of October 31, 1929, shows total assets of $70,487,331, and surplus $20,257,908. Current assets were $19,055,895, and current liabilities $6,038,023.

British American Oil

Total assets of the British American Oil Co. of Toronto are valued in excess of $26,000,000 and earnings for the year ending December 31, 1929, were over $4,300,000 according to a recent statement. Profits for 1929 are shown at $4,591,809 and after deduction of $874,499 for depreciation and $281,385 for taxes there remained $3,235,926 for distribution on ordinary shares.

Bolsa Chica Oil

The regular quarterly dividend of 2 per cent on the "A" stock of the Bolsa Chica Oil Corp. will be paid April 15 to stockholders of record March 31.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Saturday, was as follows:

Aug. 31	60.90	Nov. 29	48.60
Sept. 7	59.16	Dec. 4	50.60
Sept. 14	60.40	Dec. 11	50.51
Sept. 21	57.93	Dec. 18	49.24
Sept. 28	58.63	Dec. 24	47.36
Oct. 5	57.00	Dec. 31	48.86
Oct. 12	59.75	Jan. 8	48.56
Oct. 19	58.70	Jan. 15	48.38
Oct. 26	54.59	Jan. 22	47.13
Oct. 31	42.29	Jan. 29	47.46
Nov. 8	48.31	Feb. 5	48.13
Nov. 15	47.61	Feb. 12	47.49
Nov. 22	47.76	Feb. 19	45.85

Socony-Vacuum

Unlisted trading privileges have been extended by the New York Curb Exchange to General Petroleum Corp. stock, the new holding company in the Socony and Vacuum merger on a when, as and if issued basis.

V. O. C.

London reports state directors of Venezuelan Oil Concessions Holding Co. have proposed a plan of amalgamation with Venezuelan Oil Concessions, Ltd., to convert shares of the Holding company into their direct equivalent of share holdings in Concessions company. Holding company will be liquidated. The plan involves the creation of an additional 1,800,000 common shares of 1 pound sterling par to provide new capital for development.

NEW YORK STANDARD AND VACUUM TO MERGE

(Continued from Page 146)

in only a portion of the country, now seeks to extend its activities generally throughout the United States so as to get the most complete use of its overhead organization, of its standing with its customers and of its national advertising. For example, the New York company originally confined its distributing facilities in this country to New York and New England, where it had a great preponderance of the business. But at present there are now actively competing with each other in that territory, in addition to numerous local companies, not less than eleven separate and distinct major concerns each with widely developed distributing facilities in this territory and a number of them already having nationwide distribution for their products. In line with this tendency the New York company has already in the last few years extended its distribution into the West and Southwest. The Vacuum company has for years had a nationwide reputation for its highly

specialized lubricants, which will be of advantage to the New York company in further extending its marketing of gasoline.

The united company, in addition to the specialized lubricating products of the Vacuum company, will market, it is estimated, about 9 per cent of the petroleum products consumed in the United States, an amount comparable in volume with the business done by each of several of the larger of its numerous competitors. In foreign countries it will carry on the widespread and important business above described.

Submitted to Government

The facts as to the situation have, as has been the custom in important transactions in the past, been submitted to the Government. Both companies were former subsidiaries of the Standard Oil Co. (New Jersey). The question was raised whether the decree entered in 1911 in the so-called "Standard Oil dissolution suit," by which the control of the Standard Oil Co. (New Jersey) over its subsidiaries was terminated, might forbid this transaction between two of such former subsidiaries. The Government took the position that the questions involved should be passed upon by the courts.

Counsel for the companies have given their opinion that the merger is in conformity with the law. As to the permissibility of a union of two former subsidiaries of the Standard Oil Co. (New Jersey) counsel have advised that this question was raised before the Supreme Court of the United States in the dissolution case and that that court held that after the subsidiaries had been freed from the control of the Standard Oil Co. (New Jersey), they would be entitled to pursue any course of conduct lawful for anyone else.

There being no available method for asking the courts for an advisory expression as to the specific situation now arising, the only way to secure a ruling was for the companies to proceed and let the matter be brought before the courts in an appropriate way for determination. Under these circumstances, the directors of the respective companies felt it their duty to the stockholders of the companies to proceed, and have entered into a contract for the merger which they have brought to the attention of the Government. The Government has indicated that it proposes to institute an appropriate proceeding in equity to determine the questions involved and it is expected that the matter will be promptly disposed of.

Provisions of Contract

While in deference to these legal proceedings the contract will not be submitted to you immediately, you will be interested at this time in its provisions. The contract makes provision for uniting the assets of the Vacuum Oil Co. and the Standard Oil Co. of New York, under the name "General Petroleum Corp." To effect this end the name of the present Standard Oil Co. of New York will be changed to "General Petroleum Corp." The General Petroleum Corp. will have all the present assets of the Standard Oil Co. of New York. The General Petroleum Corp. will also acquire all the assets of the Vacuum Oil Co., and will issue and deliver to each shareholder of the Vacuum Oil Co. in exchange for these assets three (3) shares of the capital stock of General Petroleum Corp. for each share of Vacuum Oil Co. stock surrendered to the Vacuum Oil Co. for cancellation. The stockholders of the Standard Oil Co. of New York will receive new certificates in the name of the General Petroleum Corp. for their present shares.

The board of directors of the General Petroleum Corp. will, upon consummation of the contract, be composed of directors chosen in equal number from the present directorates of the Vacuum Oil Co. and the Standard Oil Co. of New York thus giving to those now conducting the business of each company an equal voice in the management.

Among the important assets of each of the present companies is the good-will attached to its name and the confidence of the public in its management and personnel. To preserve these assets there will be organized two subsidiary corporations of General Petroleum Corp., to be known, respectively, as "Vacuum Oil Co., Inc." and "Standard Oil Co. of New York, Inc," in order that the present business of the respective companies may be carried on as in the past and under present management, thus preserving the values of the corporate names, trademarks and organizations of the two companies. The Vacuum customers can thus feel assured that the high-grade lubricants and all other distinctive Vacuum products will be manufactured and marketed in all the world's markets by and through Vacuum organizations with the management and personnel with which they are familiar, thereby ensuring that the distinctive Vacuum products will be available exactly as heretofore. The customers of the Standard Oil Co. of New York can likewise feel assured that they will be dealing with the same management and personnel with which they are familiar in the marketing of the distinctive Standard Oil Co. of New York products.

Your directors unanimously believe that the carrying out of the contract will prove to be in the best interests of the stockholders of your company, and of the public we serve.

PURE OIL AND THE TEXAS COMPANY GET GOOD WELL IN THE VAN POOL

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Feb. 24.—Two more producers were completed in the Van Pool, Van Zandt County this past week while one other test, drilling on the west side, looked rather disconcerting as it is now down 3,001 feet with no appreciable showings of oil having been made. This test is the Pure Oil Co.'s No. 1 Crim, located 250 feet from the south line and 690 feet from the east line of the Crim 57-acre tract, approximately one-half mile northwest of the discovery well. It formerly cored saturated Woodbine sand at 2,880-91 feet, proving a steep dip to the west, but the sand was not found in sufficient quantities to insure production. A drill stem test is now being made at 3,001 feet. It is by far the deepest test yet drilled in the field.

The Pure Co.-The Texas Company's No. 1-A White located in the M. Gross Survey, northeast of the discovery well, was completed for an initial production of 1,160 bbls. on a one-half-inch choke at a total depth of 2,692 feet, after topping the chalk at 2,168 feet and the pay sand at 2,443 feet. This is one of the best wells registered in the field so far.

Pure-Sun Oil Co.'s No. 1-A Thompson, located in the John Walling Survey, a west offset to the above well, was also completed, making 857 bbls. in 24 hours through a one-half-inch choke, not showing up as good as its neighbor to the east. Casing was landed at 2,443 feet in this well and the hole bottomed at 2,693 feet with a 5⅞-inch liner set on the bottom.

Central Oil Co.'s No. 1 West in the Ben Wheeler district, approximately 4 miles southwest of the Van Pool is preparing to abandon at a total depth of 3,535 feet in hard shale. This is one of the first new wildcat tests to be abandoned in this area since the discovery of the Van Pool. T. G. Shaw's No. 1 Huddle, in the Richardson Survey, in the vicinity of the aforementioned test is now drilling below 3,445 feet in shale and is appearing as another failure for this area. It is located approximately 2 miles southwest of the Van Pool and looks as if it would be a defining test on this side of the pool.

Seismograph and torsion balance crews are still working all over East Central Texas, covering a territory from northern Wood County down through Smith, Henderson, Anderson and into Freestone County where the Shell and Gulf Production Co. both have crews at work "shooting" this county. Several blocks in Freestone County have been inviting considerable attention, the main ones being the Shell Petroleum Corp.'s block in the northeast part of the county, and Penn's block southwest of Fairfield. Three tests are to be started at once in the vicinity of Fairfield. The area around Turlington has been the scene of considerable "shooting" and The Texas Company, Sun Oil Co., Shell Petroleum Corp. and individuals have been leasing quite extensively in the vicinity northeast of the Penn block and around Turlington.

The Southern Crude Oil Purchasing Co. is moving its district offices from Shreveport, Louisiana to Tyler, Tex., in order to watch the East Central Texas activity more closely.

East Central Texas

Boggy Creek	3,750
Cedar Creek	45
Currie	367
Hill County	45
Mexia	4,439
Minerva	570
Nigger Creek	230
Powell	6,327
Richland	275
Thrall	475
Van	7,803
Wortham	900
Total East Central Texas	25,226
Week ending February 15	25,163
Increase	63

BETTER GASOLINE AND KEROSENE IS DEMANDED

(Continued from Page 36)

scattered among refiners in all the Mid-Continent groups.

The price paid is based on the prevailing market at the Gulf Coast as established by companies affiliated with the Petroleum Export Association. The coastal market has not changed for several months and nets the refiners 7¾ cents for 375 endpoint material and 7½ cents for 390 endpoint, basis North Texas.

These prices have been higher than the prevailing domestic market for the same grades ever since the monthly purchases were made and for that reason have been highly acceptable to the refiners. This export business has been in the nature of a "life saver" to several refiners over the past few months and has aided the general market materially in preventing large accumulations of excess material.

The fact that export orders have been placed for the first three months of the year is interpreted in trade circles as pointing to a continuance of this policy indefinitely. One of the unfavorable developments of the past year which contributed to the early decline of the gasoline tank car market in the Mid-Continent was the failure of the refiners to participate regularly in export business. No assurance has been given that the policy of the past few months will be continued. But the price collapse of last summer and fall is believed to have shown the major factors in the export association the necessity of preventing large accumulations of excess material at points where the domestic demand is not adequate.

Gasoline and Naphtha

So far as could be determined, 5¾ cents was the low of the U. S. Motor market in Oklahoma the first of the week. The market had strengthened in other areas and few complaints of price cutting are heard. Some material has been in the hands of brokers who were quoting last week as low as 5⅝ cents.

The price range on the higher gravities has not changed. The placing of the March export orders apparently strengthened some of the weak spots and is said to have stopped the acceptance of some independent export purchases at prices under the prevailing Gulf Coast market.

It is believed that the domestic market will continue to show improvement in March. Buyers are slow in accepting the higher prices and most of the inquiries for March have been 6 cents or less. The sellers are hoping that a low of 6 cents can be established before the first of the month with a possibility of gradual advance through the month.

Natural Gasoline

The steady improvement in the natural gasoline market which was predicted the first of the month has materialized. The actual orders in the Mid-Continent Field have exceeded the available supply and rather than see a too rapid advance in prices certain sellers and buyers have been content to allow some of the February business to carry over into March. The attitude of the dominant manufacturers in Oklahoma and other areas is to keep natural gasoline prices in line with the refinery gasoline market. This position was consistently maintained throughout last year and was responsible for a steady movement which was maintained despite a large increase in output. In the present situation the larger manufacturers are anxious to see a price maintained which will prove attractive to the major buyers who are in a position to blend large quantities of natural gasoline with their refinery product.

On Tuesday the A grade was steady at 5⅝ cents; Grade AA, 5⅜ to 5½ cents; Grade B, 4⅝ to 4¾ cents; Grade BB and C, 4½ cents. The advance was greatest in the BB and C grades, buying having absorbed most of the material available for delivery over the remainder of February.

Kerosene

Refiners have increased their kerosene shipments to their own bulk stations and jobber buying has improved. Several refiners reported that they had been compelled to draw on storage to take care of their orders. This buying should continue steady and unless there is a large increase in supply through changes in plant operation the market will show further improvement according to the opinion of most market observers.

The 41-43 water white grade was selling on a price range of 4⅛ to 4⅜ cents the first of the week.

Distillates

As previously explained, furnace oils are a drug on the market. Sales of specification material with low flash and low cold test at 3 cents were reported. This is forcing refiners to decrease yields, part of the furnace oil cut being added to gas oil or treated and rerun for kerosene.

High gravity fuel oil and gas oil share in this sluggishness. The fuel oils are off at least 5 cents a barrel and a few sales with greater concessions are reported. The industrial grades of gas oil have dropped to a low of 2½ cents again. The straw color low cold test gas oils are also more plentiful at lower prices.

Fuel Oil

The lower gravity fuel oils are holding better than the higher gravities. The railroad and other contracts take the bulk of this grade fuel oil and several refiners report that they have not lowered their prices on the few spot sales that they make from week to week. Prices ranged up from 70 cents for specification material.

Lubricants and Wax

Although no price changes have been made in the list of lubricants and wax it is conceded that the bright stock market is weak. The bright stock market which had an exceptionally favorable year in 1929 is faced with increasing supplies and it is expected that some adjustments downward in prices will be necessary.

A little more activity is reported in the domestic wax market. No large export orders have been placed and the price range is unchanged.

OKLAHOMA'S GOVERNOR ENTERS TARIFF FIGHT

(Continued from Page 40)

of Nowata, J. Monte Hayner, A. L. Farmer and O. O. Owens.

Chairman Cloud read a letter from Wirt Franklin, president of the association expressing confidence of victory and giving a list of names of United States senators who must be won over. The following names were listed: Heflin and

Konset your cement

Konset—the cement maximizer and 5 in 1 oil field compound, is the only cement mixing compound so far as is known, proved by the tests of the Mexican Petroleum Department to combine the following five reactions in the one operation:

1. Accelerates the set of cement.
2. Increases the early and final strength.
3. Makes Portland cement waterproof, oilproof and acidproof.
4. Sets cement in oil, gas, salt or acid water.
5. Forms a permanent bond to the basing and anchors in the strata.

Konset saves 12 days per well or better, quickening the set of the cement and speeding up production. It permanently protects against chemical water and assures maximum production from each well. Okeyed by the Petroleum Departments of three governments. Saves time and assures better work anywhere cement is used around the lease, in engine foundations, tank bottoms, derrick feet, pipe lines, floors, etc. For special floor work, cement stucco or mortar, etc., order Colored Konset. Shipped in 5—30—50 gallon drums or in one gallon cans, 6 to the case.

SLUSH-MIX
The triple-action drilling product

Offered by the Sulco chemists as "The Improved lubricator, sealer and mud heavier". Of heavy specific gravity, remaining always in suspension. Carries the cuttings from the bit to the surface. Acts as a binder in any mud and readily soluble in water. Picks up and walls up sand, shale, etc. Prevents caving. For best results choose Slush-Mix. Liquid, paste and powder, 100 lb. bags and drums.

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Boiler scale solvent.

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The world's best cleaner.

for "high-pressure" fields
HEF—T

Will control any gas pressure. Walls up holes in any formation.

for 5,000 ft. below
SULCO
concentrated
PASTE

Lubricates and waterproofs cement. Especially effective for deep drilling.

fills fissures
FISSURSEAL

Cements crevices, cracks, etc., stops lost circulation. Excellent for water shut-off and reconditioning wells.

KLEEN-A-WELL

Cleans tubing and rods, removes paraffine, asphaltum, gypsum or salt. Increases production.

GELITE

Rotary drilling mud—repays its low cost many times over.

Other Sulco "Life Preservers"

Sulco time-savers and life preservers for the oil fields include Sulco Insulating Compound, Liquid Packing, Rustcotine, Pipe Line Coating, Acid-proof Cements, High Temperature Cement and Plastic Fire Brick, Fishing Acid, Colors for detecting underground waters, Graphite and Water-Tite Seal, Belt Dressing, Deflect-O-Lite Aluminum Paint and Powder, Iron Cement, Fireproof Paint, Derrick Paint, Boiler Paint, Tank Paint, Plastic Cements, Boiler Putty, Oilproof Coating, and Technical Paint and Varnish.

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Chairman Cloud announced that any resident of the oil-producing states was eligible to membership in the association. The tariff campaign was only the first item on a big program, he said. The various speakers, all of whom were members of the association, made strong pleas for general support of the association. A large membership and more money to finance the campaign were the things desired, according to Chairman Cloud, who added that a powerful organization was working in Washington but that it must be supported by the men "back home,"

Branches of the association have been established in other oil producing states, the latest being in Illinois and Indiana and a meeting in Los Angeles this week is for the purpose of extending the association to the California fields. Members of the Northwestern Pennsylvania Oil Producers Association at a meeting held in Bradford, Pa., recently voted in favor of a tariff on oil.

Late Fields

(Continued from Page 48)

Russell and 5 miles east of the Gorham Pool.

OKLAHOMA

Magnolia Petroleum Co. has staked three new locations surrounding its new well in Section 31-6-8, a wildcat 3 miles south of production in the Sasakwa Pool. The new locations, one in the NW cor. SW NE,, the second in the NE cor. SE SW, and the third in the NW cor. NE SE, all in Section 31-6-8.

Production from the Konawa Pool is increasing; 9 wells made a total of 7,330 bbls. on the gauge of February 25, at 7 a. m. The production from each well was as follows:

Company—	Well No.	S.T.R.	Bbls.
McCulloch	1	8-6-6	15
E. L. Harris	1 and 2	8-6-6	2,883
Gypsy	1	8-6-6	245
Independent	1	8-6-6	214
Champlin	1	9-6-6	....
Champlin	2	9-6-6	2,341
Empire	1	9-6-6	792
Empire	2	9-6-6	372
McCulloch	1	16-6-6	468
Prairie	1	17-6-6	....
Total			7,330

Twin State Oil Co.'s No. 1 Charlie, NE cor. SE SW, Section 8-6-6, was drilling at 3,325 feet. The test was dry in the shallow sand.

The new wildcat well of the Amerada Petroleum Corp. and Dixie Oil Co., south of the Earlsboro Pool, the No. 1 Grounds, SE cor. NE NE, Section 22-9-5, made 7,925 bbls. off the air lift February 25. The well will be prorated to 5,810 bbls. a day.

Carter Oil Co.'s No. 1 Walker, in Section 24-7-6, in the Little River Pool, an old well drilled deeper from 4,530 feet to 4,656 feet, was shot with 10 quarts and made 970 bbls. the next 24 hours.

The second well in the Oklahoma City Pool to find the Hunton lime was the Tom Slick Oil Co.'s No. 1 Banta, SE cor. SW SE, Section 18-11-2w. The top of the Hunton lime was found at 6,810 feet, and the test was drilling in it at 6,839 feet. It had 4,500 feet of oil in the hole and some water.

The production from the Oklahoma City Pool was 91,834 bbls. from 18 wells, on the gauge of February 25.

The Indian Territory Illuminating Oil Co.'s No. 1 S. Peterson, NE cor. SW, Section 25-11-3w, flowed 2,228 bbls. from a total depth of 6,499 feet in the Simpson sand. Same firm's No. 3 B. Johnson, SE cor. NW, Section 25-11-3w, was bailing at a total depth of 6,554 feet. The fluid was within 2,500 feet of the top.

Mid-Kansas Oil & Gas Co.'s No. 1 Trosper, in Section 24-12-2w, a wildcat east of the pool, was drilling deeper at 6,216 feet.

GULF COAST

HOUSTON, Tex., Feb. 25.—The production at Refugio was extended approximately 2 miles to the northeast Tuesday with the completion of Houston Gulf Gas Co.'s No. 1 M. F. Lambert which is flowing an estimated 300 bbls. of pipe line oil daily on a three-sixteenths-inch choke from sand at 5,879-84 feet, total depth 5,895 feet. This is an entirely new sand, distinguished from the 5,400-foot sand horizon recently opened just east of the original 3,700-foot field. The oil in the new well is 31.2 gravity which is slightly higher than in the 5,400-foot wells.

The Texas Company added its fourth consecutive good well in its Port Neches Field being developed in the swamps of southwestern Orange County. Its No. 2 Polk, also the fourth test drilled, was completed Monday flowing an estimated 2,000 bbls. daily of 21.9 gravity pipe line oil. Two joints of screen were set at a total depth of 3,150 feet.

ANALYZING PRODUCTION OF VERY DEEP WELLS

(Continued from Page 48)

greater depths because of higher pressure, (c) the greater extractability at greater depths because of more gas in solution where it is available, (d) lesser loss by faults, fissures, artesian "washing," and volcanoes and springs, that deeper horizons have larger reserves, other things being equal, than shallower horizons until the optimum level is reached.

We have here the explanation of the fact that although there would seem to be a law of diminishing returns for petroleum and natural gas, judging by the increasing percentage of dry holes and the average depth of holes, we do not find such a result in the average size of new wells.

The most important economic consideration is that we should estimate higher extractabilities and higher yields with greater depths, up to the optima. Of course, with still greater depths we eventually pass an optimum extractability for these reasons:

a. The quantity and type of source materials becomes less favorable probably mainly because of the lesser resistance to rapid decomposition of the more primitive organic tissues, as in the Cambrian period.

b. The porosity becomes less as the amount of metamorphism becomes greater with depth, as in the Paleozoic and below generally.

c. With greater depths, the greater heat and pressure and the time available has increased the amount of gas relative to oil contained, as in the Cambrian.

One warning is necessary in the study of the records of very deep producing wells which increase in yield. A back pressure is usually maintained and this is manipulated to cause the well to produce in adjustment to the facilities available for disposal. Where the back-pressure is known, and the amount of mineral sediment is recorded, as well as the oil and gas for each time unit, it is probable that a prediction of yield can be made while the well is increasing or is constant, as well as while declining, as is now possible. In the future, then, as the appraiser must predict the yields of these wells, he must be provided with more variables than in the past and have correspondingly a more difficult but not insurmountable task.

OPERATORS IN TEXAS IN STATE ASSOCIATION

By L. E. Bredberg

FORT WORTH, Tex., Feb. 22.—At a state-wide meeting of independent oil producers at the Texas Hotel, here today, Tom Cranfill, president of the Cranfill-Reynolds Co. of Dallas, was elected president of the Independent Petroleum Association of Texas by acclamation. The following men were elected vice presidents: Charles Morgan, Fort Worth; Roy Westbrook, Fort Worth; D. L. Ladd, Fort Worth; and Roy B. Jones, Wichita Falls. Mr. Morgan was also elected secretary-treasurer. The three Fort Worth men were officers of the local association which was the inception of the state association.

In forming the organization the state was divided into 13 zones, each zone to have at least three directors, the zones and directors to be as follows: Panhandle Zone with Ed Meyer, Earl Calloway and John Sherrin as directors; North Permian Zone, E. G. Bedford of Midland, Robert Piner of Big Spring and Will P. Edwards of Big Spring; South Permian Zone, George Henshaw, N. E. Tanner and P. G. Northrup, all of San Angelo; San Antonio, George E. Smith, Claude E. Witherspoon and C. O. Maddox of San Antonio; Laredo Zone, George Marshall, Usher Carson and O. W. Killam of Laredo; South Fault Zone, Lem Allen, Luling, L. T. Turman of Fort Worth and C. F. Richards of Luling; West Central Texas Zone, John Gholson of Ranger, Harry Reynolds of Cisco and Leon Shields of Coleman; Wichita Falls Zone, Walter Campbell of Wichita Falls, R. L. Moore of Vernon, Clifford Moores of Wichita Falls; Abilene Zone, Gene Moutray and Tom Grisham of Abilene and Tom Bryant of Cross Plains; East Texas Zone, C. W. Murchison, E. B. Germany and Truett Cranfill, all of Dallas; North Fault Zone, E. L. Smith of Mexia, R. L. Wheelock and W. C. Stroube of Corsicana; South Gulf Coast. James Kepley and Charles Carter of Houston and W. F. Morgan of San Antonio; North Gulf Coast, Dan Harrison. Two others are to be appointed for this zone. The following were elected directors at large: J. C. Maxwell, C. L. Morgan, L. D. Ladd, Jack Danciger, C. E. Hyde, Mel Ingelright, S. B. Edwards, Stanley Thompson, Joe Danciger and John W. Naylor.

BRITISH AMERICAN CO. BUYS INTEROCEAN OIL

The British American Oil Producing Co., a Delaware corporation, which recently moved its offices to Tulsa from Wichita Falls, Texas, has completed negotiations for the purchase of all the leases and equipment owned by the Interocean Oil Co. and its subsidiaries in Oklahoma, Kansas and Texas. The purchase includes 25 producing properties with 30 producing wells that have a daily average of approximately 2,300 bbls. The combined potential production of the companies is now around 4,500 bbls. a day. An interest has also been acquired in the Hall & Briscoe acreage in the Oklahoma City Field on which two wells are now drilling.

George W. Snedden has been elected vice president of the British American Oil Producing Co. The Interocean withdraws from the Mid-Continent Field, but will operate its refinery at Curtis Bay and its asphalt plant near Baltimore, Md.

R. R. CHOATE PASSES AWAY

NEW YORK, Feb. 24.—Robert R. Choate, 45 years, headquarters executive of the oil and marketing division of Henry L. Doherty & Co., died here today after a brief illness with pneumonia. Mr. Choate had been with Henry L. Doherty & Co. and the Cities Service Corp. for 25 years. He held the position of vice-president and general manager of the Crew Levick Co., at Philadelphia, for several years. Deceased was a widower. Three children survive him. The funeral will be held in New York and burial at Gettysburg, Ohio, Mr. Choate's birthplace.

GULF COAST REFINERS EXPECT BETTER MARKET

HOUSTON, Tex., Feb. 25.—Although the past week showed no improvement in the demand for pale and red oils, Gulf Coast refiners are looking to the close of February and the first part of March to bring in sufficient new business to strengthen the higher quotations which were put into effect generally by all sellers several weeks ago. Although this month has experienced the usual February lull in business, sellers so far have been able to hold firmly to the new prices, which, if supported by the anticipated early spring demand, would result in a better market situation than has existed for some time.

There were no important changes in any products the past week. Fuel oils and gas oils continues firm in price in face of the lack of outside demand. This is largely due to the fact that refiners have shown an increased tendency toward cracking and for several weeks have been drawing from their fuel storage for this purpose rather than maintain high crude runs to stills. Although crude is cheap and plentiful, it has been found more profitable to store this crude and maintain light end production through increased cracking of cheap fuel oil.

LEGAL

DEPARTMENT OF THE INTERIOR
WASHINGTON
Call for Bids

To purchase Government royalty oil from the SE¼ Sec. 2, and NW¼, Sec. 12, T. 22 S., R. 17 E., M.D.M., Kettleman Hills oil field, California.

Pursuant to the provisions of Section 26 of the act of Congress approved February 25, 1920 (41 Stat., 437), sealed proposals in duplicate will be received in the office of the Secretary of the Interior, Interior Department Building, Washington, D. C., on or before noon of March 1, 1930, from responsible bidders for the purchase, for a period beginning April 1, 1930, and ending June 30, 1931, of royalty oil accruing to the United States from two wells, one on the SE¼, Sec. 2, and one on the NW¼, Sec. 12, T. 22 S., R. 17 E., M.DM., in the Kettleman Hills oil field, California, operated respectively by the Milham Exploration Company and the Marland Oil Company of California. The approximate quality of the oil to be sold is indicated by the following: Gravity, about 60 degrees A.P.I.; 89 per cent gasoline stock (437° F.); 8 per cent kerosene and fuel oil; 3 per cent distillation loss. The Government's royalty oil amounts to approximately 500 barrels a day and will probably decrease. It is provided under an agreement approved by the Secretary of the Interior on November 22, 1929, that both wells will be shut in and cease producing if and when the pressure in the well in Sec. 2 has been reduced so that it can be killed without hazard to life and property.

Bids must be a flat price per barrel stated in dollars and cents. Delivery of royalty oil, if and when accrued, will be made without cost to the Government on the SE¼, Sec. 2, and/or the NW¼ Sec. 12, for the account of the successful bidder by segregation in royalty tanks or by direct pipe line run as an undivided portion of production as the Government may elect. Payments for the royalty oil are to be made to the Register of the United States Land Office at Sacramento, Calif., on or before the 15th (fifteenth) day of each month following that in which delivery is made, the quantity and quality of the oil to be determined by tests, corrected for impurities, and the volume computed in terms of standard barrels at 60° F.

Each bid must be accompanied by a certified check payable to the order of the Secretary of the Interior in the sum of $1,000 as a guarantee that the bidder will, if successful, promptly execute a satisfactory contract and furnish a bond in the sum of $60,000 conditioned upon full and complete compliance with the terms of the contract.

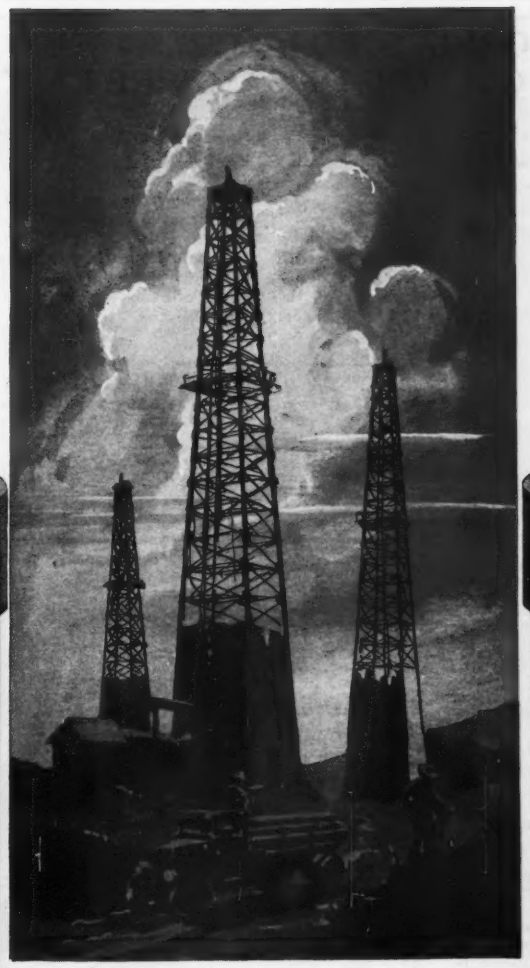
The Secretary of the Interior may accept the offer of the highest bidder and reserves the right to reject all bids whenever within his judgment the interest of the United States demands.

Sealed bids are to be submitted to the Secretary, Department of the Interior, Washington, D. C., the envelop to be marked plainly "Bid on Kettleman Hills royalty oil." No bid received after the time herein fixed for submitting bids will be considered.

Additional information can be obtained from the Geological Survey, Department of the Interior, Washington, D. C., or from the field office of the Geological Survey at Taft, Calif.

(Sgd.) RAY LYMAN WILBUR
Secretary of the Interior.

February 3, 1930.



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Of Interest to Sales Departments

Use of Petroleum For Insecticides Growing Steadily

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Feb. 24.—Petroleum is gradually becoming more and more extensively used in the insecticide industry and although the quantities stated in barrels seem to be small, they are evidently yielding attractive profits as a number of the leading oil companies are manufacturing and selling insecticides.

The Standard Oil Co. of Indiana has employed the Crop Production Institute of Durham, N. H., to report upon methods of manufacturing insecticides. The Standard Oil Co. of New Jersey has its own entomologist. The Gulf Refining Co. has made overtures for the employment of an entomologist. The Balfour-Guthrie Co. of San Francisco also employs an entomologist for this purpose. The Royal-Dutch Shell employs a group of experts in Los Angeles in the handling of insecticides.

It is roughly estimated by officials of the Department of Agriculture that the manufacture of insecticides used to protect animals from vermin and applied in households to exterminate vermin, amounts to about 150,000 bbls. a year. Largely for this purpose kerosene is used to which is added 1 pound of pyrethrum. This pyrethrum was formerly obtained from Dalmatia but since the recent World War, it has come almost exclusively from Japan. About 12,000,000 pounds of this product is now imported annually and it is estimated that half of it is used with kerosene in the preparation of insecticides.

Protecting Trees

In protecting deciduous trees and citrus fruits only 3 per cent of the amount of water is used in making a spray so that the total of the heavy oil utilized in this way is estimated to amount to not over 250,000 gallons annually. For this purpose a heavy oil is used with a viscosity from 100 to 200 Saybolt. Probably about 1,000,000 trees are sprayed annually in California and the mixture is widely used in Florida.

It is stated that there seems to be no reason why both lime and sulphur will not disappear almost entirely for purposes of insecticides and their places will be taken by petroleum.

At the present rate of progress entomologists who study this question, believe that within 10 or 15 years, the amount of oil used for spraying purposes will be doubled.

CONDEMN DISCOUNTS

The giving of commercial discounts in the sale of gasoline has been condemned in a formal resolution adopted by the Alabama Automotive Trades Association. So far as known this is the first time that any action in regard to commercial discounts has been taken by any association outside the oil business.

The resolution adopted was as follows:

"Whereas, it is the common practice of the wholesale dealers in gasoline in Alabama to give to gasoline buyers secret prices or commercial discounts and

"Whereas, such practice has a tendency to demoralize the business and destroy the profits of the legitimate retail dealers in gasoline, to reduce the amount of their sales, injure their business and destroy their profits. Now, therefore,

"Be it resolved by the Alabama Automobile Trades Association, in regular annual meet assembled at Montgomery, that the wholesale dealers in gasoline in Alabama be and they are hereby requested to discontinue such practice and not to hereafter give such secret prices and commercial discounts."

CALIFORNIA SOLD 1,253,323,800 GALLONS OF GASOLINE LAST YEAR

Figures for 1929 on gasoline gallonage of the principal distributors in California show the Standard Oil Co. of California leading with sales of 249,185,042 gallons. Shell Union is second with 196,763,242 gallons, and Richfield third with 166,515,184 gallons. The total gallonage of 24 of the leading distributors of the state for the year was 1,209,676,458. Other companies sold 43,647,342 gallons, making a grand total of 1,253,323,800 gallons.

The daily average sales of Standard of California for the fourth quarter were 655,900 gallons, Shell Union 525,632 gallons, and Richfield 429,835 gallons. The gallonage by quarters of the principal distributors is shown in the accompanying table.

Company—	First quarter 1929	Second quarter 1929	Third quarter 1929	Fourth quarter 1929	Daily average fourth quarter	Total 1929
Standard Oil Co.	57,902,624	63,276,388	67,663,270	60,342,760	655,900	249,185,042
Shell Oil Co.	45,457,304	49,414,631	53,533,193	48,358,114	525,632	196,763,242
Richfield Oil Co.	36,191,174	32,354,008	39,230,796	39,544,799	429,835	(166,515,184)
Pan American Pet. Co.	8,961,582	6,979,390	3,253,435	.....	.....	(Inc. above)
Union Oil Co.	29,172,935	28,760,943	29,338,323	26,820,772	291,530	114,092,973
Associated Oil Co.	22,885,963	22,049,442	24,733,750	23,559,534	256,082	93,228,689
General Petroleum Corp.	15,437,281	15,284,540	16,212,257	16,951,455	184,255	63,886,533
Wilshire Oil Co., Inc.	6,577,483	13,685,177	15,614,458	18,842,905	204,814	54,720,023
The Texas Company (Calif.)	15,512,505	12,766,860	12,217,556	11,061,258	120,231	51,558,179
Sunset Pacific Oil Co.	10,447,272	12,292,796	12,069,285	13,326,993	144,859	48,136,346
Hancock Oil Co.	6,532,173	9,357,037	9,577,520	7,130,555	77,506	32,597,285
Western Oil & Ref. Co.	4,590,393	6,678,932	8,334,957	9,081,534	98,712	28,685,816
MacMillan Pet. Corp.	4,504,025	6,218,379	6,418,290	5,169,606	56,191	22,310,300
Rio Grande Oil Co.	3,762,916	3,616,941	6,223,507	5,615,815	61,041	19,219,179
Hercules Gasoline Co.	4,483,836	4,057,819	4,352,859	5,245,029	57,011	18,139,543
Edington Wiltz Ref. Co.	2,352,139	3,300,625	4,040,010	3,837,542	41,712	7,877,552
Seaside Oil Co.	3,284,051	3,324,014	3,791,009	4,151,592	45,126	14,550,666
St. Helens Pet. Corp.	1,332,124	2,519,852	2,407,984	2,303,492	25,038	8,563,452
United States Ref. Co.	2,223,747	1,882,155	910,522	3,300,603	35,876	8,317,027
Lakeview Oil & Ref. Co.*	569,787	1,634,296	1,240,230	1,294,585	14,072	4,738,898
Vernon Oil & Ref. Co.	902,580	883,438	1,056,568	891,795	9,693	3,734,381
Gilmore Oil Co.	295,437	649,588	1,249,348	369,155	4,013	2,563,528
Seaboard Oil Co.	219,580	34,743	33,615	.....	.....	287,938
Navy Oil Co.	4,682	.....	.....	.....	.....	4,682
Total	281,251,454	297,721,369	323,503,742	307,199,893	3,339,129	1,209,676,458
Others	4,166,713	6,495,861	10,915,009	16,416,995	178,446	43,647,342
Grand total	287,770,306	307,517,855	334,418,751	323,616,888	3,517,575	1,253,323,800

*Figures for this company formerly included in "Others."

MAY INCREASE TAX

NEW YORK, Feb. 24.—A proposal to increase the state gasoline tax from 2 to 3 cents per gallon has been proposed in the state legislature. The proposal has the backing of the Republican majority, but strong opposition is expected to develop. The measure provides that 50 per cent of the revenue shall be retained by the counties instead of 25 per cent, as under the present law.

Up-state legislators are strongly in favor of the measure, with which they expect to raise funds to make possible the construction on a "pay-as-you-go" basis of a $100,000,000 farm-to-markets road system.

The present 2-cent tax was put over last year in the face of strong opposition, and it is believed that many lawmakers who voted reluctantly for the 2-cent imposition will be unwilling to vote for the higher level. Most of the cities in the State, including New York City, are dissatisfied with the small revenue which has come to them from the gasoline tax.

A 3-cent gasoline sales tax, it is estimated, will yield annual revenue of $40,000,000 to the State.

GASOLINE TAX BY STATES

Gasoline tax per gallon. Oregon tax increased from 3 to 4 cents effective January 1, 1930. Map prepared by Western Petroleum Refiners Association.

OIL COMPANIES TAKING SPACE IN BURNER SHOW

Executive Secretary Harry F. Tapp of the American Oil Burner Association who recently spent several days in Chicago making arrangements for the seventh annual exposition to be held there by the association from April 7-12, reports that this year's show will include exhibits by some of the large oil companies. This will be the first burner exposition in which the oil men have participated.

Eleven new booths will be opened in the exhibit hall of the hotel to take care of the demand for space. Sixty-eight exhibitors had taken booths up to February 14. They include, in addition to the oil companies, manufacturers of burners and accessories.

Among the striking features of the show will be the new color schemes displayed by several burner manufacturers. One company will have a motion picture showing the various processes in the manufacture of its burners. Some of the exhibitors will give operating demonstrations of complete plants. Accessories on exhibition will include temperature and fuel oil control devices, refractory cements, metal tubing, valves, boilers, tanks, motors, pumps, grates, nozzles, strainers, gauges, atomizers, blowers, hot water heaters, etc.

Among speakers on the convention program are E. V. Walsh, of the Timken Oil Burner Co., "Manufacturer and Dealer Obligations"; O. P. Harris, Petroleum Heat & Power Co., "The Sale of Oil Burners"; E. S. Brinsley, Credit Investment Trust of New York, "Time Payment Sales"; Carl E. Widney, Kling-Gibson Co. of Chicago, "Selling Appeals"; S. E. Andros, Quaker Manufacturing Co., Chicago, "Meeting the Dealer's Needs"; H. W. Sweatt, Minneapolis-Honneywell Regulator Co., "Reduced Temperatures at Night"; Chester Carr, E. W. Carr & Co., Inc., New Orleans, "Oil vs. Natural Gas"; William Webster, May Oil Burner Corp., Baltimore, "The Importance of Installation Engineering."

OIL FUEL FOUND TO BE TAKING PLACE OF COAL

The California Oil & Gas Association reports that petroleum fuels are taking the place of coal to a remarkable degree throughout the country. Most of the western railroads use fuel oil in their locomotives, but some of the eastern lines already are meeting with success in the use of Diesel-electric motors. Diesel engines alone are giving excellent results in many instances. Fifteen leading railroads in the United States and Canada have lately made economy tests of the Diesel locomotive and the coal-burning engine, and report that with the Diesel the saving is not less than 64 per cent.

Automobile manufacturers are endeavoring to perfect engines which will operate on Diesel. Farm tractors are being Dieselized; even motorcycles have been fitted with Diesel engines. The merchant marine is converted to this type of power.

GASOLINE-ELECTRIC CARS

The Erie railroad has placed orders for four automatic passenger cars to be powered with combination gasoline-electric motors. The cars will be operated in commuter transportation in New York City. A fifth car will be of the Diesel-electric type.

The Erie will use this type car instead of electrifying its connections into New York City. The company has also ordered four Diesel-electric tugboats for service in New York harbor.

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STATUS AND IMPORTANCE OF ISOSTASY DISCUSSED

By William Bowie
Chief, Division of Geodesy, United States Coast and Geodetic Survey*

Isostasy is really an old idea, but it is only in the last few decades that it has taken on any great prominence or importance in the study of earth phenomena.

Later isostatic investigations involved the use of the values of gravity. The test was first made for the area of the United States, but later it was extended to other land areas and also to the oceans. The results have been almost entirely favorable to isostasy. The only areas that are in doubt are very restricted in extent. It is even possible that after further data have been obtained and the investigations continued, these areas will be found not to depart materially from isostasy. So far as I am aware, I was the first investigator to set forth the idea that large isostatic gravity anomalies, whether positive or negative, are due to the presence of abnormally light or heavy rock close to the stations having the large anomalies. I mean close, both horizontally and vertically. This idea received scant attention, except by those who opposed it, until the evidence became rather overwhelming in favor of it.

Effect of Compensation

As is well known, what we call gravity anomalies are the differences between the observed and computed values of gravity. The computed value of gravity is the theoretical value at sea level for the latitude of the station computed by the gravity formula, corrected for the elevation of the station above sea level and for the effect of the topography of the world and the compensation of this topography. The compensation has been found by investigators to extend to an average depth of about 60 miles below sea level. It is true that this depth has a rather large probable error, but it is my opinion that future determinations of the depth based on vastly larger amounts of data for gravity stations in mountainous areas will give a value that will lie between 45 and 75 miles. It is only with gravity data or deflection-of-the-vertical data in areas having rather large variations in its elevations that a determination of the depth can be made with any degree of accuracy. In a plateau region of great horizontal extent or on coastal plains, the effect of the compensation will be practically the same as the effect of the local topography, regardless of the depth to which the compensation is assumed to extend. We must, therefore, depend on geodetic data in mountainous regions for the determination of the depth of compensation.

The determinations of gravity at sea by Doctor Meinesz have shown that the average isostatic anomaly for those portions of the Atlantic, Pacific and Indian oceans, where the bottom is comparatively level and of wide horizontal extent, is practically zero. There is an outstanding difference between the average values of gravity anomalies at sea and on land, but this can be accounted for in large part by the fact that we are using the gravity formula as derived from determinations on land where the geoid is above the spheroid and are applying this formula to the gravity data for ocean areas where the geoid is below the spheroid. It is believed that if we could derive a gravity formula for the spheroidal surface, there would be an exceedingly small difference between the average gravity anomaly for land and that for ocean areas. In fact, the two might agree almost exactly.

With the rather definite conclusion that gravity anomalies are caused to a large extent by the presence of extra heavy or extra light material close to the station, we are able with gravity data to discover at least the major features of buried structure. If one is working on a plain like the coast plain of Texas or Louisiana, and investigating only a limited area, the principle of isostasy need not be taken into consideration. If gravity stations are spaced close together, the effect of the buried structure will be indicated by the differences in the values of gravity after corrections have been applied for the elevation of the stations above the sea level, and for the difference in latitude between them. If there is a decided difference in elevation amounting to 50 or 100 feet, then corrections should be applied for the effect of the local topography. The effect of the isostatic compensation of the local as well as the world-wide topography would be identical for two stations not more than 15 or 20 miles apart.

A Complete Gravity Survey

I am sure that the science of geology and prospecting operations for oil and minerals would be greatly benefited if we had a complete gravity survey of our country. The stations should be spaced at intervals of 25 to 30 miles, but wherever a decided difference was found in the values of the anomalies for contiguous stations, additional gravity stations should be established to show the extent of the area having abnormal anomalies.

At present, to make such a gravity survey would be relatively expensive, but with so many scientific men and also institutions showing great interest in gravity determinations, it seems reasonably certain that in a few years some method will be devised by which gravity determinations can be made with the requisite accuracy, but at a lower cost in time and money than at present. When such a method is devised, it is reasonably certain that the director of the Coast and Geodetic Survey will begin a campaign of gravity determinations. With the present method, we are able to determine the value of gravity within about one part in a million, which is equivalent to the attraction of a disk of rock about 30 feet thick. Any new method should approach this accuracy, although even with an uncertainty of two or three parts in a million, the results would be accurate enough to disclose the major features of any buried structure.

While isostasy has been generally accepted as an established scientific principle during the past decade, yet scant use has been made of isostasy in treatises on structural and dynamic geology. It is true that the isostasist cannot ignore the facts of geology, but it is equally true that the geologist cannot diregard the isostatic principle. I believe that isostasy must be given full weight in all researches concerning the origin of mountains, plateaus, oceans and continents, and the causes of earthquakes and volcanoes. It is reasonably certain that much of the uplift now observed in mountain regions occurred subsequent to the formation of the mountains. As erosion progresses, the area from which material is taken will rise to restore the isostatic balance. The subcrustal material that enters crustal space to restore or maintain the equilibrium is certainly heavier than the surface material. If we assume that the difference in density is 20 per cent, the crustal prism will rise approximately 800 feet, if 1,000 feet of surface material is eroded. This means that, in order to base-level an area, several times as much matter must be worn away as there was in the original mountain mass. During this process of restoration or maintenance of the isostatic equilibrium, there must be much fracturing and folding of strata, with undoubtedly some overthrusting or underthrusting. We cannot, therefore, safely use the observed distortion and movement of material in a mountain area as indications of the extent of vertical and horizontal movements of the earth's surface at the time the mountain system was formed.

*Before Geophysical Prospecting Committee, Annual Meeting, A.I.M.E., February, 1930. Copyright, 1930, A.I.M.E.

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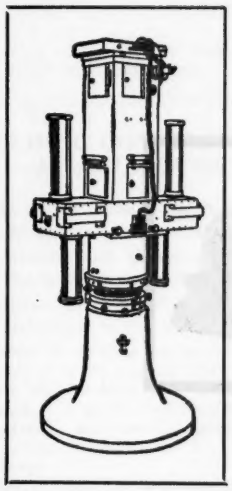

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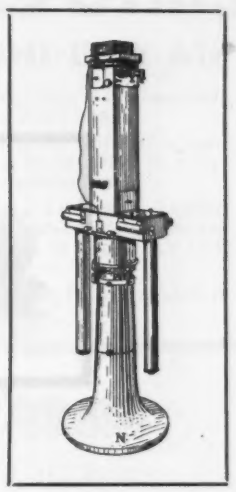

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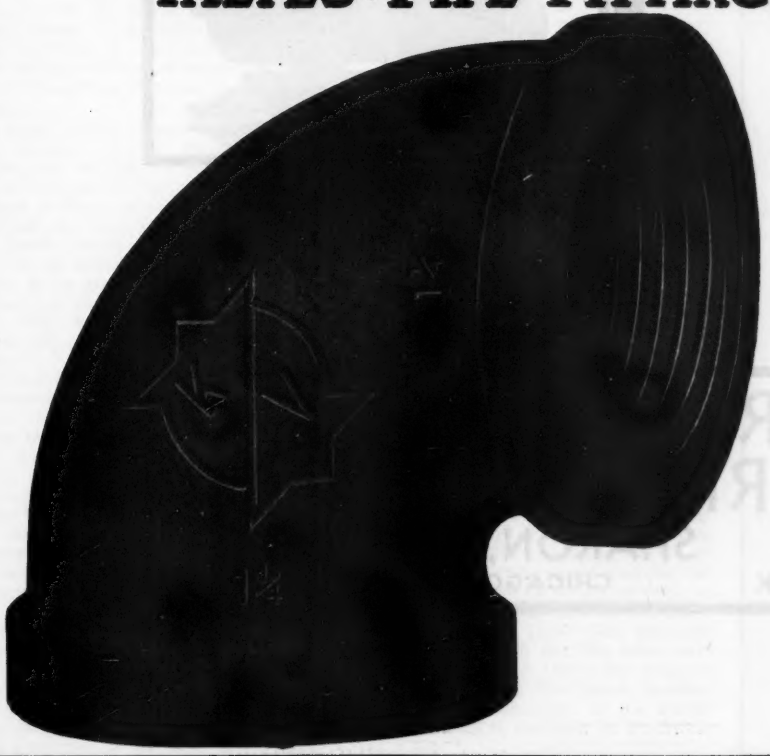

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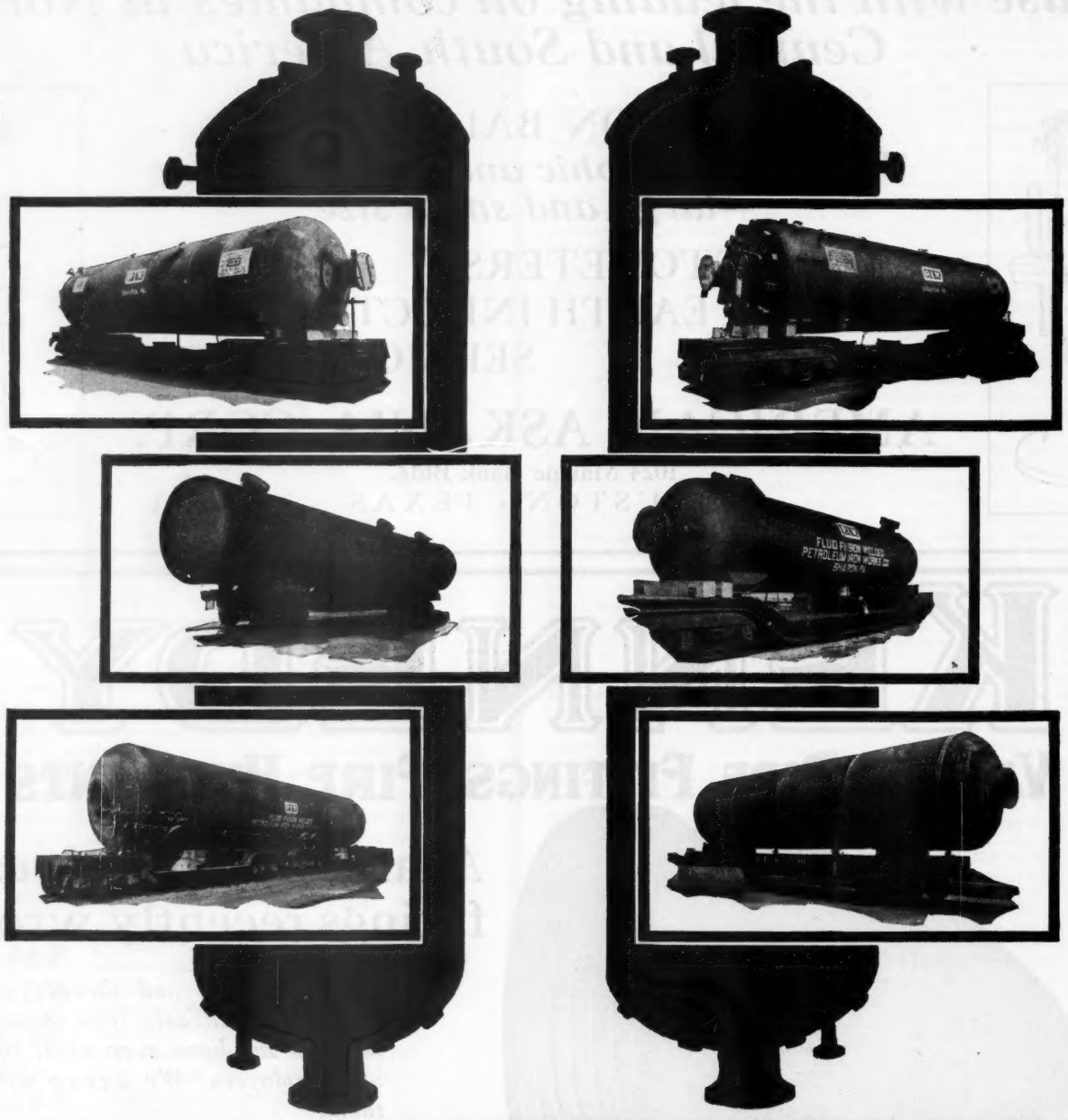

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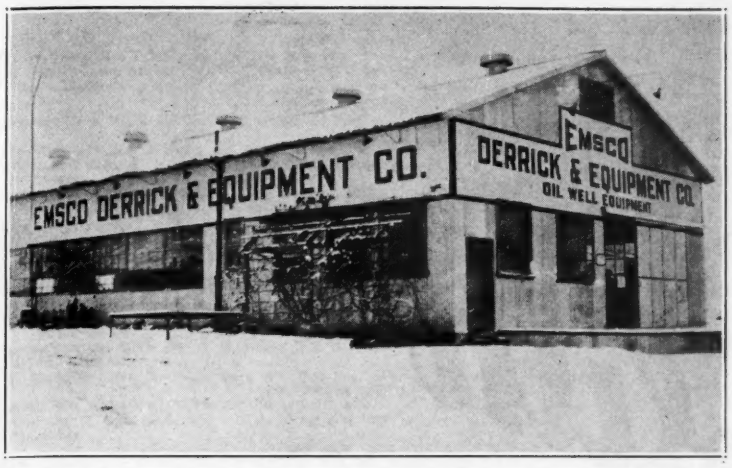


This picture of the Emsco Derrick & Equipment Co.'s building in Taft, Calif., was taken in a snowstorm.

WELDING CONFERENCE AT ARLINGTON, TEXAS

The fourth annual welding conference will be held under the direction of the Engineering and Trades Department of the North Texas Agricultural College at Arlington, Tex., March 13 and 14, and an invitation to attend is extended to all users of welding equipment and those interested in its various phases of application for repairs and manufacturing. Arlington is located between Fort Worth and Dallas and can be reached by the interurban railway or by well paved highways.

The purpose of this conference is to extend the services of the college by bringing together on the campus a group of men who are interested in the latest developments and possibilities of welding.

The program will start Thursday morning at 11:30 with Roy W. Burdett presiding. The address of welcome will be given by E. E. Davis, dean of the North Texas Agricultural College, and the first technical discussion will be led by J. H. Allison, whose subject will be "General Problems of the Welder."

After luncheon at the college dining hall with an address by C. C. Rigney, head of the Engineering and Trades Department of the North Texas Agricultural College, "Application of Oxy-Acetylene Welding in Building and Bridge Construction" will be discussed by G. O. Carter, consulting engineer of New York City.

A paper will be presented by Mr. Hansen, designer of the Hansen electric welder, and the balance of the afternoon will be devoted to the demonstration of various problems in gas and arc welding.

George L. Dickey, associate dean of the North Texas Agricultural College, will act as toastmaster at an informal dinner to be given at the college dining hall at 7 p. m. and following the dinner there will be motion pictures shown which will complete the first day's program.

Friday, March 14, will be opened with a question box conducted by W. J. Lacey which will take the form of an open forum at which time answers to questions on various subjects will be discussed.

Lunch will be served at the College dining hall at 1 o'clock and D. H. Kiber will make an address, and at 2:30 a speaker from the A. O. Smith Corp., Milwaukee, Wis., will read a paper. The "Possibilities of the Additional Use of the Oxy-Acetylene Flame" will be discussed by A. J. Faucek, followed by a short discussion on "Problems of Structural Steel Welding" by Austine Brothers of Dallas.

The balance of Friday afternoon will be given over to demonstrations of various problems in gas and arc welding and the meeting will adjourn at the end of that session.

The manufacturers of arc and gas welding equipment will have their very latest developments for exhibit. Their representatives will be pleased to discuss specific questions and give any help or information desired.

GEOPHYSICAL ABSTRACTS

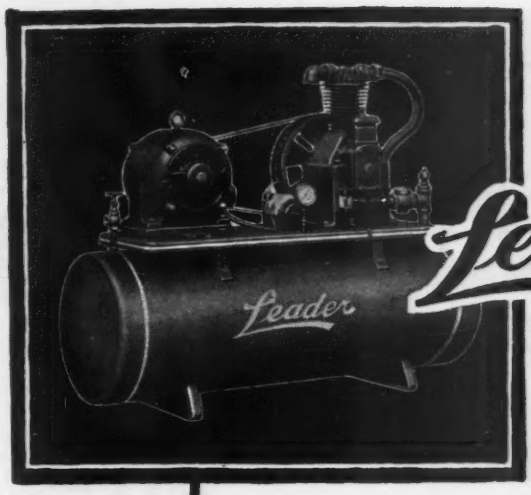
Because of the importance and rapid progress which is being made in the science of applied geophysics, the United States Bureau of Mines is issuing a monthly journal on this subject. This journal contains short articles briefly describing the results of papers which are being published in some 80 periodicals relating to the discovery of petroleum and mineral resources. Prominent geophysicists have voluntarily offered their assistance as contributing editors and have thereby materially enhanced the value of this publication. There have been issued to date nine numbers, including a patent abstract journal. It is hoped that these journals may prove of service to executives and scientists who may be interested in this new field. This publication is issued free of charge and parties desiring to receive copies should apply to the United States Bureau of Mines, Washington, D. C.

POLAND'S DECLINE

While Rumania shows a considerable increase in oil production in 1929, Poland indicates a fall off last year, so far as one can judge from the Boryslaw group of fields which produced the great bulk of the output. For 1929 the figure was 436,220 tons, against 497,280 tons in 1928. It is remarkable that Poland should decline continuously, because every reputable authority on the country's oil resources believes that they are relatively large and to a great extent untouched. One reason for the retrogression, says the London Petroleum Times, is the reluctance of companies operating in Poland to go outside the proven fields only in a half-hearted manner.

FOREST BUYS MORE LEASES

BRADFORD, Pa., Feb. 22.—The Forest Development Co. has just completed the purchase of two important oil properties in the heart of the Bradford Field. It bought the 291-acre lease of W. P. Hyde & Son at Bells Camp and the following day bought an adjoining lease of 107 acres from Fitzgerald & Ostrander. It is said that the Hyde lease was purchased for $500,000 but the price paid for the Fitzgerald & Ostrander property was not given out. The Forest Development Co. is a subsidiary of the Forest Oil Corp., largest producer in the Bradford Field.



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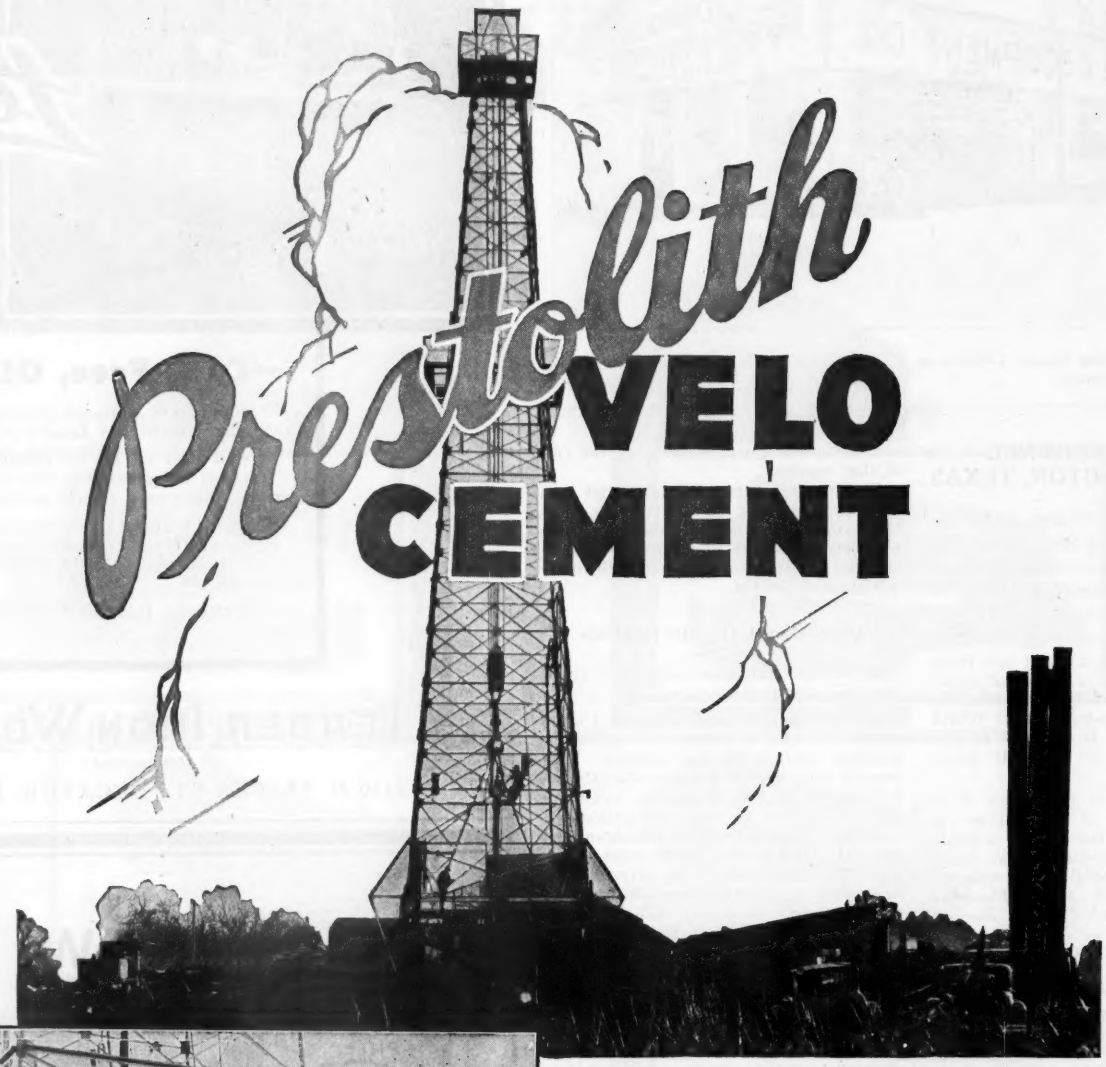

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Halliburton Process

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Write for complete information.

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ST. LOUIS KANSAS CITY MEMPHIS

Manufacturers of "Red Ring" Portland Cement and "Prestolith" brand of Velo Cement. Producers of sand, gravel and Bethany Falls crushed stone.

396

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 50)

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w ..Spudded and shut down.
J. M. Henry and others' No. 1 Abraham, SE cor. NW Sec. 4-5-5w .....Rig.

GRANT COUNTY

Gypsy Oil Co.'s No. 1 Belderbeck, C SE SE Sec. 27-28-7w. Wilcox 5,647 ft.; drlg. 5,670 ft.; water.
Baucher et al's No. 1 Deadman, SW SE Sec. 12-28-4w ..Shut down 4,737 ft.
Cowden and others' No. 2 Vollmer, CEL NE SW Sec. 22-25-4w .....Shut down 5,640 ft.
Otstot's No. 1 Tabor, C NE NE SE Sec. 23-26-3w .....Drlg. 3,495 ft.

GARVIN COUNTY

Nelson et al's No. 1 Strickland, NE SW Sec. 10-4-3 ....Shut down 109 ft.
Pickham-Harris' No. 1 Community Gaines, C NW NE Sec. 11-4-1 .....Drlg. 2,270 ft.

GREER COUNTY

Helmerich & Payne's No. 1 Henck, NW cor. Sec. 23-6-24w. Fishing 2,205 ft.
I. T. I. O. and others' No. 1 fee, C SW NE Sec. 17-6-24w .....Shut down 2,100 ft.

HARMON COUNTY

Harmon-Tex Oil Co.'s No. 1 Hoadley, NE cor. Sec. 17-4-24w .....Shut down 700 ft.; to skid rig.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w..Shut down 625 ft.

HARPER COUNTY

Empire's No. 1 Bruce, C NE SW Sec. 12-25-20w .....Rig.
Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w .....Drlg. 7,214 ft.

HASKELL COUNTY

Mid-Western's No. 1 Posester, C NE SE Sec. 33-10-22 ..Rig.
Holden's No. 1 Phillip, SE cor. Sec. 3-9-18e .....Shut down 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE SW Sec. 10-9-18e ..Shut down 2,387 ft.
Sanboise Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e ..Shut down 2,100 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW Sec. 15-5-11 .....Rig.
Canady et al's No. 1 Kanard, NW SW Sec. 29-9-12 .....1,000,000 ft. gas 2,284-90 ft.; total depth 2,815 ft.; shut down.
Irwin et al's No. 1 Jones, SE NW Sec. 30-5-10 .....Rig on ground.

KAY COUNTY

Skelly and Empire's No. 1 Maple, SW cor. Sec. 20-27-4 ..Spudding.

KINGFISHER COUNTY

Superior Oil Co.'s No. 1 Story, SE cor. Sec. 25-19-5w ....Fishing 6,285 ft.
Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w .....Shut down 6,015 ft.

KIOWA COUNTY

Hyde et al's No. 1 Jones, SE cor. Sec. 23-3-18w .....Abandoned 515 ft.
Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w. Drlg. 1,525 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NW Sec. 23-9-24...Total depth 5,440 ft.; 15,000,000 ft. gas; Fishing 5,488 ft.

LATTIMER COUNTY

Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e .....Drlg. 1,700 ft.

LOGAN COUNTY

Currier's No. 1 Young, C SW NE SW Sec. 34-17-4w ....Rig.
Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w..Shut down 3,970 ft.

McCLAIN COUNTY

Sunray Oil's No. 1 Newsome, C SE NE NE Sec. 16-5-3 .....Drlg. 3,640 ft.

McINTOSH COUNTY

T. C. Young's No. 1 Derrison, Sec. 3-12-15 .....Shut down 710 ft.
Jennings Bros.' No. 1 Crabtree, NW SW NE Sec. 21-10-14 .....Shut down 4,100 ft.
Patterson and others' No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Shot 240 qts. 5,446-5,559 ft.; shot went off up hole; fishing.

MUSKOGEE COUNTY

Mid-Western Oil Co.'s No. 1 Unknown, C NW SW Sec. 31-12-19 .....Est. 4,000,000 ft. gas 666-90 ft.; completed.
Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ..Shut down 1,011 ft.

NOBLE COUNTY

Gypsy Oil Co.'s No. 1 Bergstrom, SE NE Sec. 28-22-1w ..Rig.
Peerless et al's No. 1 Wentz, NW SW Sec. 22-22-1 .....Drlg. 3,279-3,310 ft.; flowed 110 bbls.

OKFUSKEE COUNTY

Irwin et al's No. 1 Davis, SE NW Sec. 16-13-9 .....Drlg. 290 ft.
Henry Oil Co.'s No. 1 Harjo, Sec. 36-12-9 .....Shut down 2,795 ft.
E. L. Robinson's No. 1 Rice, NW Sec. 2-10-9 .....Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10 ..Shut down 3,661 ft.

OKLAHOMA COUNTY

Warr et al's No. 1 Castle, SW NW Sec. 20-11-3w .....Location.
J. F. Cunniff, trustee's No. 1 Church Land, NE SW SE Sec. 17-12-4w .....Drlg. 2,740 ft.
Magnolia and Ramsey's No. 1 Johnson, C NE SW Sec. 35-13-3w .....Drlg. 4,432 ft.
Ryan Consolidated's No. 1 Lawton, NE NW Sec. 3-11-2w. Drlg. 4,600 ft.
Tom Slick Oil Co.'s No. 1 Martin, C NW NW Sec. 13-13-1w .....T. D. 6,971 ft.; water; plugging back.
Hall & Briscoe's No. 1 Holmes, NE cor. SW SE Sec. 10-11-3w .....Drlg. 4,027 ft.

OSAGE COUNTY

Kay Co. Gas' No. 1, C N half NE Sec. 28-24-4 .....Drlg. 535 ft.
Continental Oil Co.'s No. 1, NW SE SE Sec. 24-24-5 ....Drlg. 1,325 ft.

PAWNEE COUNTY

Shaffer O. & R. Co.'s No. 1 Jones, SW NE Sec. 22-20-5..Location.
Cochran and others' No. 1 Green, NE cor. SW Sec. 15-23-5 .....Rig.

PITTSBURG COUNTY

Empire O. & R. Co.'s No. 1 Williams, C NE SE Sec. 33-7-16e .....Shut down 3,975 ft.
Kerr & Koy's No. 1 Hall, C NW NW Sec. 32-4-12 .....Shut down 3,502 ft.

POTTAWATOMIE COUNTY

Keister & Manning's No. 1 Rowlett, SW SE NE Sec. 30-8-4 .....Drlg. 4,375 ft.
Payne Drlg. Co.'s No. 1 Bullock, SE NE Sec. 22-6-3 ....Rigging up standard tools 3,933 ft.

ROGER MILLS COUNTY

Lucy & Stone's No. 1 Williams, C SW Sec. 23-12-24w ....Rig.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ....Shut down 2,769 ft.

SEMINOLE COUNTY

Producers & Refiners' No. 1 Factor, NW SW Sec. 30-6-6 .....Rig.
Independent Oil & Gas Co.'s No. 1 Johnson, C NE NE Sec. 33-9-8 .....Rig.
Prairie Oil & Gas Co.'s No. 1 Anders, NW cor. Sec. 23-6-6 .....Drlg. 360 ft.
Superior Oil Co.'s No. 1 Morgan, SE cor. Sec. 19-6-6 ....Drlg. 1,720 ft.
Magnolia's No. 1 Webster, NE SE NW Sec. 31-6-8 .....Rigging up standard tools 2,690 ft.
Sunray Oil Co.'s No. 1 Sunday, NW SE Sec. 25-5-5 .....Location.

WOODS COUNTY

Peerless O. & G. Co.'s No. 1 Crowell, C NW NE Sec. 23-28-16w .....Drlg. 3,550 ft.
Gypsy-Prairie and others' No. 1 Thompson, SE cor. SW Sec. 10-25-15w .....Fishing 6,104 ft.
Sinclair Oil & Gas Co.'s No. 1 Showwalter, C SW SW Sec. 33-27-16w .....Fishing 6,739 ft.

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-23-17w .....Shut down 1,387 ft.
Prairie Oil & Gas and others' No. 1 Wilber, NE cor. NW Sec. 23-23-17w .....Drlg. 6,090 ft.
Billy's Oil Co.'s No. 1 Watt, C SE Sec. 9-23-20w .....Drlg. 5,420 ft.
Burgoyne Bros.' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w .....Shut down 1,910 ft.

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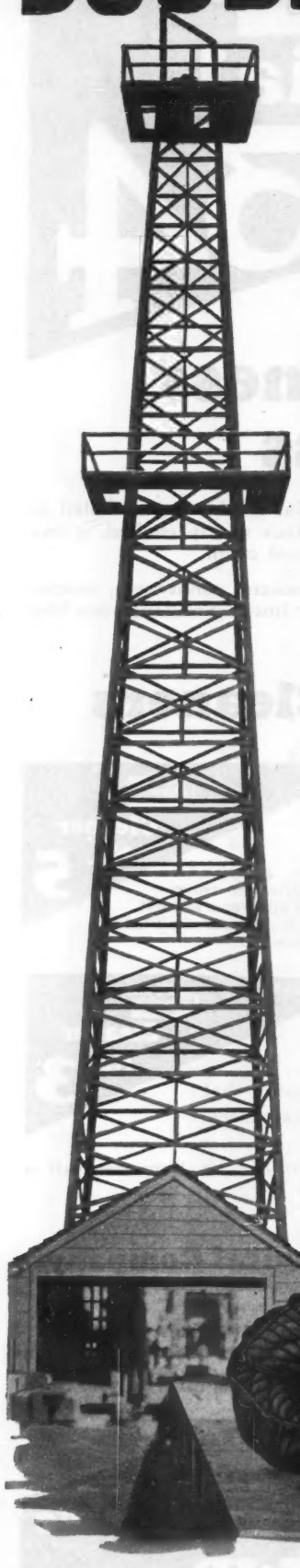

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SOUTHERN OKLAHOMA

ATOKA COUNTY

Bryant-Croxton's No. 1 Mason, NW NE NW Sec. 4-1s-14..Shut down 1,560 ft.
Bookshire's No. 1 Guinn, NW cor. Sec. 18-3s-10 .....Shut down 100 ft.

BRYAN COUNTY

Slab Oil Co.'s No. 1 Ryle, NW SE SE Sec. 27-6s-7 .....Location.
Marshall's No. 2 fee, C SW SE NW Sec. 26-5s-7 .....Shut down; 6-in. csg. 365 ft.
Yale Oil Syndicate's No. 1 Craige, C NW NE Sec. 36-9s-9e .....Shut down 2,035 ft.

CARTER COUNTY

Campen-Lasater Co.'s No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 .....Cleaning out 1,980 ft.

CHOCTAW COUNTY

Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6-19e .....Shut down 1,346 ft.

COMANCHE COUNTY

Pelwin Oil Co.'s No. 1 Tafepirdy, C NW NE NE Sec. 5-1s-9w .....Location.

COTTON COUNTY

Empire O. & R. Co.'s No. 1 Chambers, NW SE Sec. 8-3-9w .....Rig.
American Ref. Co.'s No. 1 Miller, SE SW Sec. 9-5s-12w..Shut down 2,153 ft.
T. Medlin's No. 1 Johns, SW SE Sec. 8-2s-9w .....Shut down 1,260 ft.

JEFFERSON COUNTY

Hart's No. 1 Standfield, C W half NE SE Sec. 33-7s-6w .....Drlg. 825 ft.

JOHNSTON COUNTY

N. A. Neff's No. 1 Chapman, C SW NW Sec. 20-4s-5 ....Location.

LOVE COUNTY

Gilcrease Oil's No. 1 Burkheart, NE NW Sec. 13-6s-1 ...Location.

MARSHALL COUNTY

Golden Rule Oil Co.'s No. 1 Reeves-Gray, C NW SE NE Sec. 19-6s-6 .....Drlg. 380 ft.

McCURTAIN COUNTY

Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 .....Drlg. 2,008 ft.

STEPHENS COUNTY

Wirt Franklin Pet. Corp.'s No. 1 McPhail, NW SE Sec. 1-2s-7w .....Rig.
Smythe et al's No. 1 Johnson, NE cor. Sec. 30-2-5w ....Shut down 2,476-87 ft.

TILLMAN COUNTY

Flake's No. 1 Barba, NE SE NE SE Sec. 19-1s-16w ....Drlg. 200 ft.
Allen Bros.' No. 1 Howell, SW NE Sec. 13-1-17w .....Shut down 775 ft.
Nance et al's No. 1 Massie, NE NW Sec. 36-1s-6w .....Location.
Landfair and others' No. 1 Smith, SE SW SE Sec. 6-2s-16w .....Shut down 2,535 ft.

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

(Continued from Page 53)

Cress' No. 1 Sanden, NE cor. Sec. 12-15-2 .....Rig.
Prairie's No. 1 Lachard, C NW SW NE Sec. 12-16-2 ....Drlg. 2,415 ft.
Hiatt & Durham's No. 1 Wendt, NW cor. Sec. 17-16-2 ...Spudding.
Kruger et al's No. 1 Diche, C NW NE NE Sec. 17-13-4 .....Shut down 2,390-2,400 ft.; water.
E. N. Morgan's No. 1 Whithair, NW SE Sec. 9-12-1 ....Drlg. 1,000 ft.

DOUGLAS COUNTY

Steinbuckel's No. 1 Unknown, SW NE NW Sec. 34-14-21..Rig.
Jenkins & Scott's No. 1 Haden, SE NW Sec. 10-12-17 ..Shut down 550 ft.

EDWARDS COUNTY

Skelly's No. 1 Johnson, NE SW Sec. 21-26-17w .....Drlg. 4,120 ft.
Barnsdall Oil's No. 1 McCarty, NW NE Sec. 31-25-17w..Drlg. 3,890 ft.
Dixie & Amerada's No. 1 McCarty, SW cor. Sec. 22-25-17w .....Drlg. 3,927 ft.

ELK COUNTY

H. F. Fleming's No. 1 Shered, NW cor. Sec. 16-29-9 ....Shut down 50 ft.
Empire and Arkansas Fuel's No. 1 Record, C NW NE SE Sec. 32-30-10 .....Shut down 2,350 ft.

ELLIS COUNTY

Central Commercial Oil Co.'s No. 1 Helms, SE cor. NE Sec. 2-12-20w .....Location.
Phillips Pet. Co.'s No. 1 Clinton, SE NW Sec. 5-12-17w..Rig.
Streeter & Stearns' No. 1 Leiker, SW NE Sec. 26-13-20w..Shut down 1,290 ft.
Byrene et al's No. 1 Fisher, NW SE Sec. 4-11-20w .....Shut down 1,000 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w .....Drlg. 2,765 ft.

ELLSWORTH COUNTY

Tatlock et al's No. 1 Sackem, C SW SE Sec. 25-17-9w ..Drlg. 3,145 ft.

FORD COUNTY

McNabb et al's No. 1 Fowler, C SE Sec. 26-27-22w .....Shut down 400 ft.
Swain et al's No. 1 Kenthorne, C NW Sec. 21-25-24w ....Drlg. 845 ft.

GRAHAM COUNTY

Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w..Shut down 4,340 ft.
Naylor et al's No. 1 St. John, NW SE SE Sec. 27-8-25w..Rig.

GREENWOOD COUNTY

Ward & McGinnis' No. 1 Henley, SW NE Sec. 23-25-9 ..Drlg. 1,805 ft.
F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12 ..Drlg. 985 ft.

HARPER COUNTY

Beeler et al's No. 1 Bear, C NE Sec. 21-31-6w .....Shut down 1,830 ft.

HARVEY COUNTY

Superior's No. 1 Regier, SE NW Sec. 11-22-3w .....Drlg. 3,510 ft.
Liggett et al's No. 1 Regier, C SE NW SE Sec. 2-23-3w..Drlg. 3,455 ft.
E. W. Marland, Inc.'s No. 1 Neiman, C NE SE NE Sec. 8-24-2 .....Shut down 3,375 ft.
Mrs. Gay et al's No. 1 Grove, C NW NE NW Sec. 29-23-1w .....Shut down 3,360 ft.

HODGEMAN COUNTY

Phillips Pet.'s No. 1 Hausman, NW NE Sec. 30-22-22w..Drlg. 4,995 ft.

JEFFERSON COUNTY

Wichita Oil Co.'s No. 1 Simpson, NW cor. SW SW Sec. 19-10-17 .....Rigged up and shut down; abandoned.

KINGMAN COUNTY

D. P. Fleeger's No. 1 Ashcraft, SE SW NE Sec. 16-28-7w .....Wilcox 4,343 ft.; water; total depth 4,532 ft.; abandoned.
White Eagle's No. 1 Lorenz, C NE SW SE Sec. 35-27-5w..Siliceous lime 4,255-62 ft.; water; shut down.

LYON COUNTY

Sheedy et al's No. 1 Evers, C NE SE NE Sec. 4-21-10 ..Rig.
Sheedy et al's No. 1 Reese, SW SE Sec. 16-20-10 .....Shut down 1,200 ft.

MARION COUNTY

Empire O. & R. Co.'s No. 1 Black, C NE NW SW Sec. 27-19-2 .....Drlg. 2,552 ft.
Marshall et al's No. 1 Higgins, NE cor. Sec. 33-19-5 ....Rig.

McPHERSON COUNTY

Galt Brown et al's No. 1 Zeitlow, C NE SE SE Sec. 7-17-1w .....Drlg. 1,580 ft.
Dixie Oil Co.'s No. 1 Johnson, SW cor. Sec. 20-17-3w ....Drlg. 2,800 ft.
McCulloch Oil Co.'s No. 1 Cornelius, SW cor. Sec. 7-21-4..Drlg. 3,730 ft.
Kansas Oil Co.'s No. 1 Otto, SW NW Sec. 21-20-1w .....Fishing 3,480 ft.
Milmac's No. 1 Decker, NW cor. Sec. 11-20-3w .....Shut down 1,472 ft.
Transcontinental Oil Co.'s No. 1 Algers, NE SW Sec. 1-19-5w .....Water 4,011-14 ft.; abandoned.

MORTON COUNTY

Mangle et al's No. 1 Youngren, C SE NW Sec. 24-32-42..Spudded; shut down.

MORRIS COUNTY

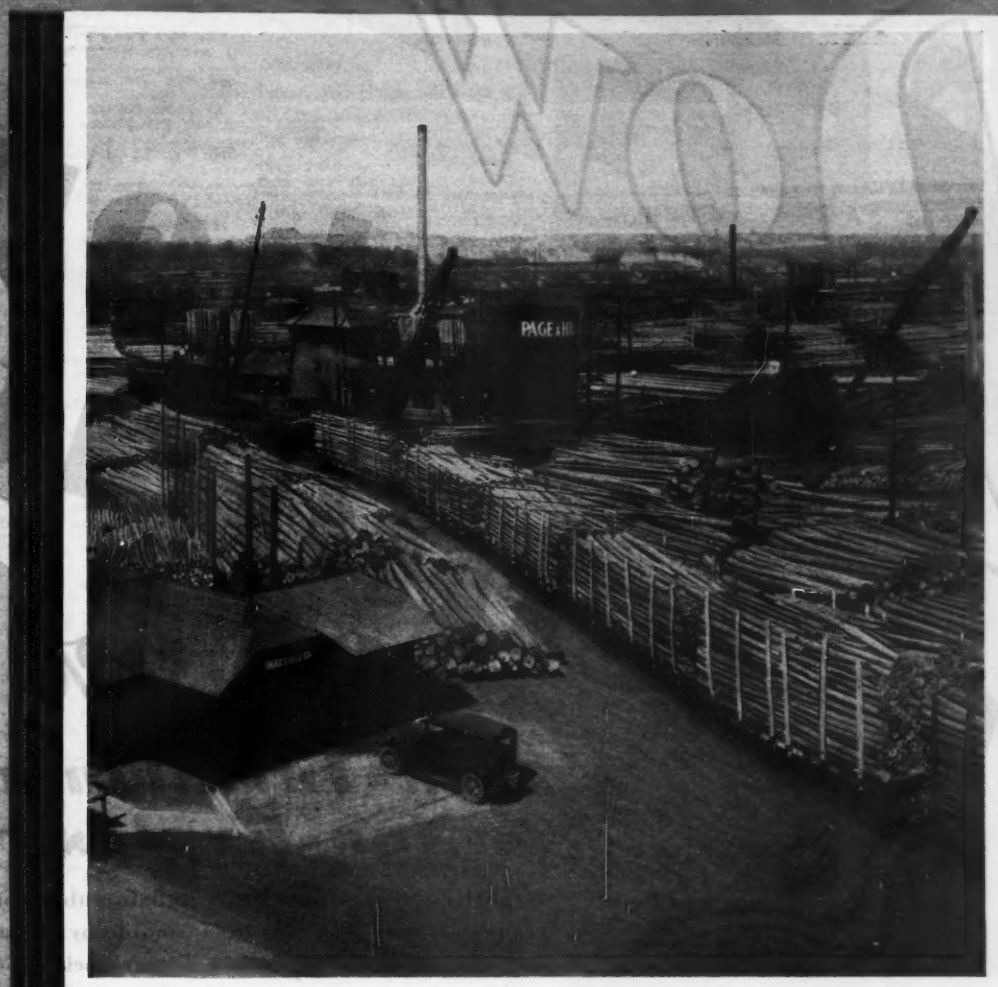
Urschell et al's No. 1 Scott, NE SW Sec. 6-16-6 .....Shut down 1,600 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, C SW Sec. 17-4-21w .....Rig.

OSBORNE COUNTY

Phillips Pet. Co.'s No. 1 Grieve, NW SE NE Sec. 6-7-12w..Drlg. 4,375 ft.



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PAWNEE COUNTY

Prairie O. & G. Co.'s No. 1 Black, SW NE NE Sec. 11-20-18w ..... Drlg. 3,782 ft.

PRATT COUNTY

O'Haver & Jones' No. 1 Garacke, C NE SW Sec. 7-26-14w ..... Drlg. 3,861 ft.
Wilcox O. & G. Co.'s No. 1 Bappin, SW NW Sec. 7-26-15w ..... Underreaming 8-in. csg. 2,735 ft.

RENO COUNTY

M. M. Valerius' No. 1 Stevens, C NE SE NE Sec. 6-26-7w ..... Rig on ground.
Wilcox O. & G. Co.'s No. 1 McPheeters, SW NW Sec. 22-26-8w ..... Drlg. 3,755 ft.
Witt's No. 1 Olsen, C SE NW Sec. 14-22-6w ..... Drlg. 3,160 ft.
Skelly Oil Co.'s No. 1 Birkett, NE SW Sec. 30-24-7w .... Wilcox sand 4,172-96 ft.; water; shut down.

RICE COUNTY

Tatlock et al's No. 1 Ploog, C SW SE Sec. 33-18-9w .... Rig.
Miller & Detrick's No. 1 Shumway, C SW Sec. 2-20-9w .. Abandoned 3,636 ft.; water.
Burgher's No. 1 Fair, C SE NE NE Sec. 14-21-10w .... Drlg. 2,487 ft.
Derby Oil Co.'s No. 1 Johnson, C NW NE SE Sec. 24-20-6w ..... Underreaming 8-in. csg. 3,125 ft.
Danciger et al's No. 1 Bell, C SW Sec. 16-19-8w ..... Underreaming 8-in. csg. 2,900 ft.
McCullough et al's No. 1 Williams, C NE Sec. 35-20-8w .. Rig.

RILEY COUNTY

Grey et al's No. 1 Smith, NE SE Sec. 30-6-6 ..... Shut down 1,970 ft.
Derby & Shaw's No. 1 Lindstrom, NE cor. Sec. 32-7-5e .. Shut down 2,245 ft.

ROOKS COUNTY

A. H. Kruger's No. 1 Steis, NW SE SW, Sec. 12-9-16w .. Shut down 570 ft.

RUSH COUNTY

Danciger Oil & Refining Co.'s No. 1 Nave, NW cor. Sec. 26-17-17w ..... Shut down 3,060 ft.
Milmac's No. 1 Mohr, C NW Sec. 11-18-16w ..... Drlg. 1,710 ft.

SALINE COUNTY

Austin et al's No. 1 Olsen, NW SW SE Sec. 10-15-4w ... Abandoned 3,690 ft.

SEDGWICK COUNTY

Tavender et al's No. 1 McLean, SE SW SE Sec. 23-26-1w ..... Drlg. 200 ft.
McCullough Oil Co.'s No. 1 Buckles, NW cor. SE Sec. 3-28-1w ..... Fishing 1,115 ft.

SHAWNEE COUNTY

Jenkins & Scott's No. 1 Sherman, NW NE Sec. 28-10-15 ..... Shut down 985 ft.
Jenkins & Scott's No. 1 Haden, NE SE Sec. 8-12-14 ..... Shut down 750 ft.

SHERIDAN COUNTY

Mandalin O. & G. Co.'s No. 1 Unknown, C SE SW SW Sec. 27-7-26w ..... Spudded; shut down.

STAFFORD COUNTY

Gibson's No. 1 Mueller, C SW Sec. 11-23-14w ..... Drlg. 3,525 ft.

STEVENS COUNTY

Argus Oil Co.'s No. 1 Armstrong, CNL S half NW Sec. 16-34-39w ..... Rig.
Argus Oil Co.'s No. 1 Parker, C SW Sec. 19-34-36w .... Location.
Argus Oil Co.'s No. 1 Smith, C SW Sec. 13-33-37w ..... Rig.
McNabb and others' No. 1 Ramey, C SW Sec. 1-33-38w .. Drlg. 550 ft.
Argus Gas Co.'s No. 1 Hobbe, C SE Sec. 17-32-37w ..... Rigging up standard tools 2,409 ft.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w ..... Shut down 1,600 ft.

SMITH COUNTY

Phillips Pet.'s No. 1 Clydesdale, SE NW Sec. 23-5-14w .. Drlg. 4,116 ft.

SUMNER COUNTY

Hatfield's No. 1 Dauber, NE cor. Sec. 18-30-1w ..... Shut down 50 ft.
Kingwood Oil Co.'s No. 1 Stayton, C NE Sec. 18-31-2w .. Chat 3,845-70 ft.; show oil; drlg. 4,050 ft.
Slick et al's No. 1 Peasel, NW cor. Sec. 33-31-1w ..... Chat 3,651-59 ft.; averaged 85 bbls. daily last week.
Lario O. & G. Co.'s No. 1 Osborne, NE SE Sec. 21-30-1w ..... Chat 3,590-3,605 ft.; water; shut down 3,680 ft.
E. K. Carey and Laredo Oil Co.'s No. 1 Welsch, SW SE Sec. 9-34-1e ..... Drlg. 3,751 ft.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w ..... Rig.

TREGO COUNTY

Dixie and Amerada's No. 1 Reitmayer, C NE NE Sec. 19-14-21w ..... Drlg. 2,837 ft.
Prairie Oil & Gas Co.'s No. 1 Kutina, C NE SW NE Sec. 29-15-21w ..... Shut down 4,285-90 ft.; water.
Phillips Pet. Co.'s No. 1 Spitz, SE cor. Sec. 24-12-25w ... Estimated 15 bbls. 4,160-65 ft.; drlg. 4,640 ft.
Day et al's No. 1 Gugler, SW NE NE Sec. 36-12-21w .... Shut down 50 ft.
Day et al's No. 1 Unknown, NE NW SW Sec. 2-11-21w .. Drlg. 3,456 ft.

WASHINGTON COUNTY

McCool & Vincent's No. 1 Linn, NW cor. NE Sec. 27-4-3 .. Shut down 3,100 ft.

WOODSON COUNTY

Oko Oil Co.'s No. 1 Hougland, SW NE NE Sec. 2-24-14 .. Drlg. 515 ft.

WILDCAT OPERATIONS IN NEBRASKA

FRANKLIN COUNTY

U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w ..... Rig.

CHASE COUNTY

Chase Pet. Co.'s No. 1 Ingold, C NE Sec. 24-6n-38w ..... U.R. 5-in. csg.; T.D. 4,265 ft.

FURNAS COUNTY

Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW SW Sec. 28-1n-22w ..... Shut down 1,750 ft.
Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w .. Shut down 3,250 ft.

RICHARDSON COUNTY

Norton et al's No. 1 Hauser, NE cor. Sec. 26-1-14 ..... Location.

ROCK COUNTY

North Central Dev. & Drlg. Co.'s No. 1 Leonard, SE cor. NE Sec. 14-32-18w ..... Drlg. 900 ft.

WEBSTER COUNTY

Mid-Kansas Exploration Co.'s No. 1 Platt, C SE one-half Sec. 3-1n-11w ..... Shut down 555 ft.

SUMMARY OF STATEMENTS MADE FEBRUARY 10, 1930, RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDING JANUARY 31, 1930

Company—	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	787,014.24	439,729.00	707,092.49	566,559.42	489,455.33
S. W. Pa. P. L.	511,042.96	90,898.30	694,205.73	292,868.36	510,251.04
Eureka P. L.	1,427,435.53	367,547.89	306,779.33	261,587.52	489,229.06
Buckeye P. L. (Macksburg)	609,936.03	358,430.62	35,062.31	188,277.50	70,531.89
Buckeye P. L. (Lima, etc.)	4,764,964.92	85,676.96	2,498,314.06	900,037.30	1,191,737.30
Buckeye P. L. (Cleveland)	85,063.78	10,647.91	66,588.01	2,188.64	60,614.32
Indiana P. L.	742,902.49	3,482.83	3,097,808.55	1,549,996.22	1,464,430.92
Cumberland P. L.	470,501.33	182,383.51	3,034.80	238,821.39	.....
Southern P. L.	316,573.11	.....	253,588.52	62,190.22	195,767.29
Bradford Trans.	199,625.21	432,916.17	.....	486,905.56	.....
N. Y. Transit	310,237.52	37,659.17	283,198.88	189,945.65	36,663.63
Northern P. L.	569,978.67	.....	669,394.48	196,645.06	332,125.77
Tide Water Pipe	162,368.84	.....	.....	392,513.08	.....
Tuscarora Dev.	266,285.45	.....	.....	517,121.55	.....
Total January 31	11,223,930.08	2,009,372.36	8,615,067.16	5,845,657.47	4,840,806.55
Total December 31	11,036,959.25	2,018,784.05	8,727,320.47	5,309,374.88	4,931,446.19
Difference	186,970.83	9,411.69	112,253.31	536,282.59	110,639.64

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CF Regulators have had the control of Natural Gas as their most important mission almost from the first major production and distribution enterprises. Natural Gas has had most of its development under CF Regulation. . . . CF Regulators have Natural Gas to thank for much of the progress made in more reliable, more accurate and safer service from producers' wells to consumers' homes.
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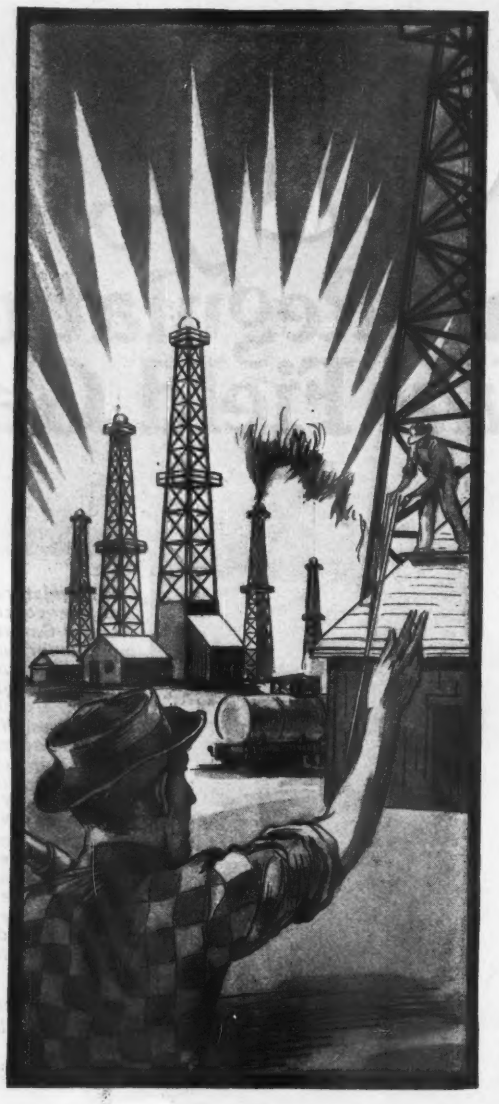

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THE ANDREWS STEEL CO.
NEWPORT KENTUCKY

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

For Week Ending February 12

TEXAS PANHANDLE

Gray County

Magnolia Petroleum Co.'s No. 4 J. E. Wright, 330 feet north and west of the SE cor. of the S half of the SW of Section 13, Block 3, I.&G.N. The Texas Company's No. 1 J. E. Wright, 330 feet north and east of the SW cor. of the SE of Section 13, Block 3, I.&G.N.

Hutchinson County

Dixon Creek Oil Co.'s No. 2 R. F. Cheatham, 330 feet north and 1,650 feet west of the SE cor. of the N half of the SE of Section 38, Block Y. C. B. Penny's No. 3 Johnson Brothers, 330 feet north and east of the SW cor. of the east 80 acres of the SW of Section 35, Block Y. Phillips Petroleum Co.'s No. 2 Johnson Brothers (Katz), 330 feet north and west of the SE cor. of the SW of the SW of Section 35, Block Y. Same company's No. 2 Johnson Brothers (Margaret), 330 feet south and 990 feet east of the NW cor. of the NW of Section 34, Block Y.

Potter County

Canadian River Gas Co.'s No. 1 R. B. Masterson-N, 1,320 feet north and 330 feet west of the SE cor. of Section 17, Block G.&M. 3, Gunter & Munson Survey.

Wheeler County

Murchison & Fain's No. 6 I. Close, at the C of the SE of the SE of Section 78, Block 23, H.&G.N.

NORTH CENTRAL AND WEST TEXAS

Archer County

Perkins & Cullum's No. 1 J. T. Richardson-B, 150 feet south and west of the NE cor. of the east 10 acres of the south 20 acres of the west 40 acres of Section 14, South Anderson Ranch Subdivision. Prairie Oil & Gas Co.'s No. 8 J. T. Richardson (Clark), 563 feet south and 200 feet east of the NW cor. of the east 40 acres of the west 80 acres of Section 14, South Anderson Ranch Subdivision.

Brown County

Phillips Petroleum Co.'s No. 1 Mrs. T. S. Williams-A, 1,425 feet south and 1,250 feet east of the NW cor. of the J. Beck Survey No. 792. Venmex Oil Co.'s No. 2 G. T. Butler-A, 150 feet north and 450 feet east of the SW cor. of the east 43 acres of the north 121 acres of the G. T. Butler 215.68-acre tract out of the Thomas Benson Survey No. 783.

Coleman County

Vacuum Oil Co. and others' No. 5 L. Weaver, 675 feet north and 660 feet east of the SW cor. of Lot 16, A. Gabel Survey No. 271. Arcadia Refining Co.'s No. 1 S. E. Switzer, 150 feet north and west of the SE cor. of Lot 8, W. Farris Survey No. 279. Greene Production & Chapman's No. 1 P. and B. Barton, 150 feet south and east of the NW cor. of the SW of Section 92, E.T.R.R. Jamison-Pollard & Forster's No. 1 B. Lynch, 2,732 feet south and 150 feet east of the NW cor. of Lot 10, W. Farris Survey No. 279. Permian Oil Co.'s No. 1 Sealy & Smith, 150 feet south and east of the NW cor. of the O. H. Gibbs Survey No. 155. Tidal Oil Co.'s No. 3 J. L. Stewardson, 930 feet north and 150 feet west of the SE cor. of Section 91, E.T.R.R.

Comanche County

Southwest Gas Co.'s No. 1 N. J. Cogburn, 687 feet south and 686 feet west of the NE cor. of Lot 20, J. P. Stevenson Survey No. 3.

Cooke County

Danciger Oil & Refining Co.'s No. 1 J. W. Mount-A, 150 feet south and west of the NE cor. of the J. C. Meeks Survey A-758. Same company's No. 1 J. W. Mount-B, 660 feet north and east of the SW cor. of the J. L. Walters Survey A-1,155.

Ector County

Landreth Production Corp.'s No. 2 University Land-T, 990 feet south and 330 feet west of the NE cor. of Section 3, Block 35, University Land.

Eastland County

Outlaw & Prairie Oil & Gas Co.'s No. 1 W. F. Dillon, 150 feet south and east of the NW cor. of the S half of Section 6, McLennan County School Land, Leagues 3 and 4.

Loving County

The California Co.'s No. 1 J. G. Allen, 330 feet northwest of the southeast line and 330 feet NE of the SW line of Section 90, Block 1, W.&N.W.R.R. Same company's No. 1 Reagan & McElvain, 330 feet southwest of the northeast line and 330 feet southeast of the northwest line of Section 84, Block 1, W.&N.W.R.R. Lockhart & Co.'s No. 3 Bowen & Wells, 330 feet southwest of the northeast line and 330 feet northwest of the southeast line of Section 92, Block 1, W.&N.W.R.R.

Mitchell County

The California Co.'s No. 10 H. C. Miller, Lease 4, 1,320 feet south and 2,650 feet east of the NW cor. of Section 22, Block 28, Township 1n, T.&P.

Montague County

Continental Oil Co. & Bridwell Oil Co.'s No. 4 Mrs. L. Cunningham-C, 5,360 feet north and 1,467 feet west of the SE cor. of the T. R. Edmondson Survey A-222.

Palo Pinto County

R. S. Dalton's No. 1 R. S. Dalton, 150 feet south and east of the NW cor. of the E half of Section 1,787, T.E.&L.

Pecos County

Cardinal Oil Co.'s No. 6 Mrs. F. E. Forborg, 450 feet north and 150 feet west of the SE cor. of the W half of Section 539, Arnold & Barrett Survey A-3. Shell Petroleum Corp.'s No. 12 M. A. Smith, 930 feet south and 1,819 feet west of the NE cor. of Section 27, Block 194, G.C.&S.F. Same corporation's No. 13 M. A. Smith, 2,970 feet south and 3,060 feet west of the NE cor. of Section 27, Block 194, G.C.&S.F. Same corporation's No. 14 M. A. Smith, 2,970 feet south and 1,740 feet west of the NE cor. of Section 27, Block 194, G.C.&S.F. Same corporation's No. 2 M. A. Smith-B, 1,006 feet south and 330 feet west of the NE cor. of Section 24, Block 194, G.C. &S.F. Transcontinental Oil & Arkansas Fuel Oil Cos'. No. 2 M. A. Smith, 330 feet south and 1,060 feet west of the NE cor. of the SE of Section 10, Block 194, G.C.&S.F. Same companies' No. 3 Smith, 330 feet north and 1,960 feet west of the SE cor. of the NE of Section 10, Block 194, G.C.&S.F. Same companies' No. 1 M. A. Smith-A, 2,310 feet south and 1,290 feet west of the NE cor. of Section 11, Block 194, G.C.&S.F. Transcontinental Oil Co. and others' No. 2 J. T. Sellman, 990 feet south and 2,310 feet west of the NE cor. of Section 8, Block Z, T.C.R.R.

Shackelford County

Campbell Oil Co.'s No. 1 C. A. Bowman, 2,300 feet south and 3,200 feet west of the NE cor. of Section 90, Block 12, T.&P. C. F. Gibson's No. 1 J. H. Nail, 150 feet south and east of the NW cor. of Section 104, Block 10, E.T. R.R. C. Morton's No. 1 W. A. Green, 1,717 feet southeast of the northwest line and 783 feet southwest of the northeast line of Section 815, T.E.&L. Roma Drilling Co.'s No. 5 W. McLemore, 150 feet north and east of the SW cor. of the N. Williams Surveyy (shown as N. J. Brown). E. J. Stump's No. 1 M. J. Brewster, 810 feet south and 150 feet east of the NW cor. of the SW of Section 48, Blind Asylum Land. Texas Consolidated Oil Co.'s No. 5 W. D. Reynolds-B, 150 feet north and 1,350 feet east of the SW cor. of the N half of the NW of Section 23, Block 11, T.&P.

Stephens County

Phillips Petroleum Co.'s No. 1 C. E. Sikes, 510 feet south and 330 feet west of the NE cor. of the C. E. Sikes 169.7-acre tract out of Section 13, Block 6, T.&P.

Throckmorton County

C. & B. Oil Co.'s No. 2 K. Leathers, 1,716 feet north and 450 feet west of the SE cor. of Section 934, T.E.&L.

Wichita County

P. Flynn's No. 1 G. L. Woodward, 990 feet north and 660 feet west of the

They look good —they STAY good!

AT Kelleyville, Oklahoma, this Dixie Drilling Company's set of Spang Weldless Jars looks just as good on the up-trips as on the down. That's because they've been individually drop forged *without welds* from a single billet of highest grade alloy steel—then scientifically heat treated and finished to accurate specifications.

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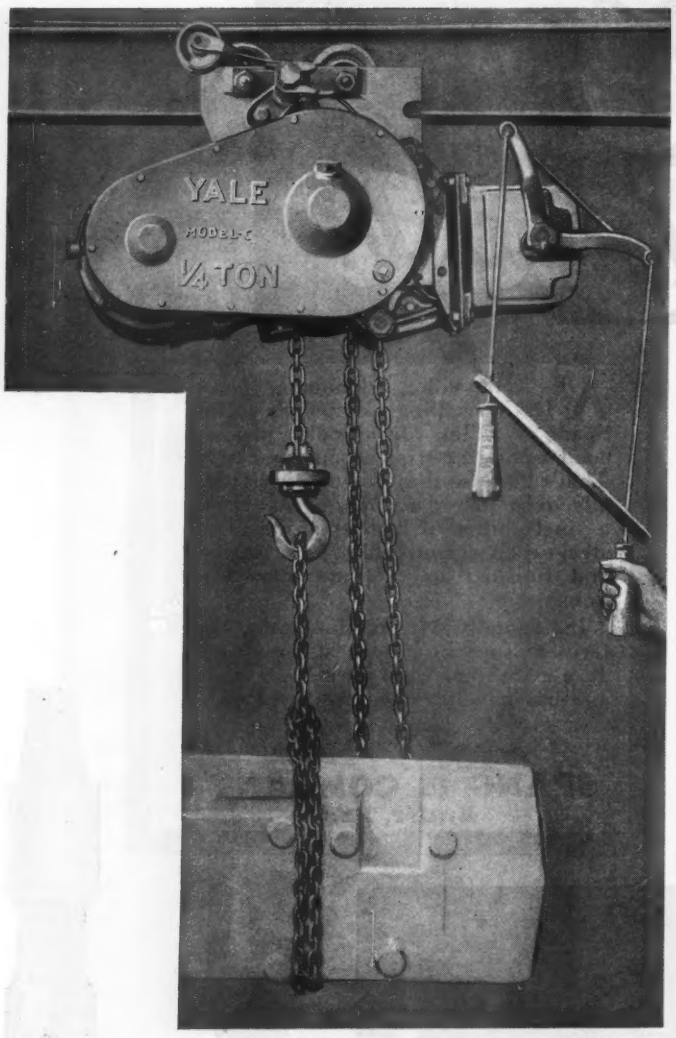

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Are your loads handled electrically?

The Yale ¼ Ton Model C Ball Bearing Electric Chain Hoist is the ideal unit for handling light loads safely and rapidly. It is highly efficient and inexpensive to maintain. Easily adjusted for any size of I-beam from 4 inches to 9 inches. The motor, of the ball bearing type, is fully enclosed and can be furnished for use with either alternating or direct current.

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YALE Hoisting and Conveying Systems

SE cor. of Section 178, Waggoner Colony Subdivision. Humble Oil & Refining Co.'s No. 21 W. H. Taylor, 503 feet north and 150 feet west of the SE cor. of Block 81, K.W.V.L.

Winkler County

Humble Oil & Refining Co.'s No. 3 J. B. Walton-B, 2,310 feet south and west of the NE cor. of Section 47, Block 26, School Land.

Young County

J. M. Hickey's No. 1 W. D. Hall, 150 feet south and west of the NE cor. of the south 60 acres of the W. D. Hall 186-acre tract out of Section 167, T.E. &L. Panhandle Refining Co.'s No. 1 H. O. Prideaux-F, 450 feet north and 150 feet west of the NW cor. of the R. J. Calvin 200-acre tract, and located on the H. O. Prideaux 345-acre tract out of the A. Rohus Survey A-240, being 650 feet north and 150 feet west of the SE cor. of their lease "F."

Perkins & Junker's No. 1 L. F. Gragg, 111 feet north and 150 feet east of the SW cor. of Section 210, T.E.&L. Stump & Heydrick's No. 4 J. B. Daniel, 150 feet north and east of the SW cor. of the south 40 acres of the E half of Section 164, T.E.&L. United Producers Co.'s No. 1 W. B. Bailey, 150 feet south and west of the NE cor. of the south 40 acres of the northwest 80 acres of Section 165, T.E.&L.

Corrections

Brown County—P. French and others' No. 1 R. L. Fry, 150 feet north and east of the SW cor. of Section 36, H. T.&B.

Gray County — Magnolia Petroleum Co.'s No. 5 fee, 990 feet north and 990 feet east of the SW cor. of Section 14, Block 3, I.&G.N.

Hutchinson County—Texarado Oil Co.'s No. 2 J. M. Sanford, 330 feet south and 990 feet east of the NW cor. of the north 80 acres of the south 160 acres of Section 83, Block 46, H.&T.C.

Pecos County—Cardinal Oil Co.'s No. 1 F. E. Forborg, 341 feet north and west of the SE cor. of the W half of the Arnold & Barrett Survey No. 539, A-3. Same company's No. 1-A Mrs. F. E. Forborg, 206 feet north and 415 feet west of the SE cor. of the W half of Section 539, Arnold & Barrett Survey, A-3. Same company's No. 2 F. E. Forborg, 735 feet north and 150 feet west of the SE cor. of the W half of Section 539, Arnold & Barrett Survey, A-3. Same company's No. 3 Forborg, 155 feet north and 735 feet west of the SE cor. of the W half of Section 539, Arnold & Barrett, A-3. Same company's No. 5 Forborg, 150 feet north and 443 feet west of the SE cor. of the W half of the Arnold & Barrett Survey No. 539, A-3. Southern Crude Oil Purchasing Co.'s No. 1 J. H. Tippett, 150 feet south and 371 feet west of the SE cor. of the W half of the Arnold & Barrett Survey No. 539, and located in Section 61, Block 194, G.C.&S.F.

UNIFORM VALUATIONS FOR TAX ASSESSORS

SHREVEPORT, La., Feb. 22.—Anticipating 1930 assessments, a special committee on tax valuations of the Louisiana-Arkansas division of the Mid-Continent Oil and Gas Association has held a series of meetings and conducted much research work during the past several weeks culminating in a report which the executive committee has just approved. It places a uniform valuation on wells, tanks, drilling rigs, etc., which heretofore have been turned in to the assessors on anything but a uniform basis. The association's action in this matter is understood to have the approval of the assessors of all northern Louisiana parishes in which oil or gas is produced and so far as Caddo is concerned it is understood this uniform valuation will be accepted from all operators. Assessors in all other oil and gas parishes probably will follow suit. Since valuations and definitions arrived at by North Louisiana operators may be of interest to those in other oil and gas areas, the report of the tax valuation committee is reproduced in full:

The tax valuations committee is of the opinion that the following values are reasonable and just and should be used by all concerned in making tax renditions on various units of oil and gas producing properties throughout the State of Louisiana:

Standard rigs, all kinds	$350
Derricks, all kinds	100
Engines, all kinds	300
Pumping power (including buildings, rod lines and miscellaneous equipment), all kinds	400
Boilers, all kinds	400
Pumps, all kinds	100
Lease tanks, wood and steel (per barrel of capacity)	$0.30

(Tanks listed for rendition are not to be itemized by sizes; total number and their total capacity only being rendered.)

Drilling rigs and equipment, irrespective of size	$5,000

(The term drilling rig includes draw-works, rotary table, slush pumps, engine, boiler, drill stem, fittings and appurtenances ordinarily and necessarily required to complete a rotary unit.)

Oil and gas wells (including casing in ground, sucker rods, tubing and the ordinary material and appurtenances necessary to make such wells complete producing units, but excluding derricks, standard rigs, engines and boilers, these being rendered separately), as follows:

Wells 1,000 feet or less	$500
Wells 1,000 to 2,000 feet	1,000
Wells 2,000 to 3,000 feet	1,500
Wells 3,000 feet and over	2,000

Pipe lines 2 inches and less, circulating tanks, small pumps, meters and regulators should be rendered as miscellaneous lease equipment.

Gasoline plants and pumping stations (oil and gas), wherever practicable, should be listed as a unit and each company is expected to arrange its valuations in consultations with taxing authorities.

Wooden tanks one to five years old, per barrel capacity	$0.30
Steel tanks one to five years old, per barrel capacity	.25

Tanks over five years old to be valued at 5 cents per barrel less.

(These values are for tanks having a capacity in excess of 20,000 bbls.; tanks of less capacity to be valued according to actual average value.)

EXPANDING OPERATIONS IN EGYPTIAN FIELDS

Anglo-Egyptian Oilfields, Ltd., affiliated with the Royal Dutch-Shell, has carried on a general expansion program embracing both field operations and refinery improvement during the past year. The company has considerable crude production in Egypt, where it produced a total of 264,234 tons of crude oil during 1928. Highlights in field operations were the discovery of a new producing area in the northern zone of the Hurghada Field, where the company's production is centered, and the abandonment of wildcatting in the Farsan Islands through Red Sea Petroleum Co., a subsidiary, following failure of the first test well and unfavorable geological reports on the remainder of the area. The company is prospecting an extensive concession in Somaliland in an effort to develop a crude reserve.

In the refining branch of its operations, Anglo-Egyptian completed the erection of two new Trumble distillation plants at its refinery at Suez, and recently completed construction of a cracking plant at the refinery, which is now reported in production.

Detailing the expansion program of the company, Sir Reginald MacLeod, chairman of the board of Anglo-Egyptian, in his annual report said in part:

"On the debit side of the profit and loss account you will notice that the various items dealing with the working expenses on the field and in the refinery show an increase. These increased expenses are the natural result of the very much greater proportionate increase in the production obtained from Hurghada. Larger production demands additional handling on the field, the total transport charges increase, and finally the refinery is more fully employed. This fuller employment of the refinery on our own crude is reflected in the drop of £25,000 in the receipts for treating imported oil, as we have had very much less surplus capacity available for treating other companies' oil. I do not think any of us will want to cavil at any slight increase in working expenses, which may be brought about by such a satisfactory increase in crude production.

Alterations at Refinery

"Alterations made at the refinery have enabled us to widen the range of products manufactured from crude. Prices for

Tristate Royalty Corporation

(Organized under the Laws of the State of Delaware)

Exchange National Bank Bldg. Tulsa, Oklahoma

Our aim is to develop a policy of operation for a royalty company that will receive the approval of the bankers and the oil fraternity of the Mid-Continent Field.

The royalty business is here as one of our major industries and we believe is entitled to the same recognition by bankers and the public as any other business, if the policy of operation is conducted along conservative lines and by a competent organization, properly financed.

There is very little difference in our policy of operation from that of a major producing company, when you eliminate the lifting cost, development cost and depreciation on equipment.

We desire to operate our company along such lines as are recognized as proper, profitable and perpetuating, and we aim to help establish the royalty business on the same high plane that the major producing companies now enjoy.

Our policy, we believe, merits general confidence, and will safeguard the investing public from the unscrupulous royalty operator, and encourage capital that is commensurate on a basis that is consistent with legitimate, sound banking principles.

OFFICERS AND DIRECTORS

W. E. BROWN ---------- President
Vice President Royalty Corporation of America
Tulsa, Okla.

COLER A. YOAKAM ---------- Vice President
Formerly Geologist, Sinclair Oil & Gas Co.,
Tulsa, Okla.

JOHN G. ELLINGHAUSEN ---------- Secretary
Secretary Royalty Corporation of America,
Tulsa, Okla.

E. C. LOVE ---------- Treasurer
President First National Bank, Chandler, Okla.

C. W. BENEDICT ---------- Director
Vice President Producers National Bank,
Tulsa, Okla.

A. S. SANDS ---------- Director
Sands & Campbell, Pawhuska, Okla.

J. W. COAST ---------- Director
Formerly Asst. Mgr. Tidewater Oil Co.

HORACE J. SMITH ---------- Director
President Horace J. Smith & Sons, Pawhuska, Okla.

Auditors and Appraisers

L. E. CAHILL & CO.
Tulsa Trust Building
Tulsa, Okla.

Counsel

POE, LUNDY and MORGAN
Hunt Building
Tulsa, Okla.

Geologist

COLER A. YOAKAM
Tulsa, Okla.

Depositories

FIRST NATIONAL BANK & TRUST CO.
Tulsa, Okla.

FIRST NATIONAL BANK & TRUST CO.
Formerly American-First National Bank
Oklahoma City, Okla.

HARRIMAN NATIONAL BANK
New York City

PRODUCERS NATIONAL BANK
Tulsa, Okla.

Transfer Agent

HARRIMAN NATIONAL BANK & TRUST CO.
New York City

Registrar

LIBERTY NATIONAL BANK & TRUST CO.
New York City

ASSETS:

Tristate Royalty Corporation has already acquired an interest in a diversified list of producing and non-producing acreage, totaling over 20,000 acres on which there are 33 producing wells and seven drilling wells, with many additional drilling locations to be made. The above represents a carefully selected group of properties now showing a very profitable return on the investment and provides for the Company a substantial foundation upon which to further expand its operations.

Tristate Royalty Corporation will also control, through Common Stock ownership, THE ROYALTY CORPORATION OF AMERICA, one of the most successful Royalty Companies now operating in the Mid-Continent Field and which has shown a continued record of substantial growth and progress, with royalty holdings under 62,000 acres on which there are over 400 producing wells and in excess of 25 wells drilling. The acquisition of this latter Company will result in many mutual advantages, since a working arrangement between the two companies will effect many economies of operation, namely:

1.—The elimination of overlapping overheads through the centralization of the geological, engineering and field organization by prorating between both companies the maintenance expenses of these departments. This will in effect provide for both Tristate Royalty Corporation and Royalty Corporation of America a saving of approximately 50 per cent of their respective overheads which would otherwise be necessary were they to maintain duplicate organizations, and will also furnish to Tristate Royalty Corporation the immediate services of an established, experienced and efficiently operated organization which would require a large expenditure to duplicate.

2.—The centralization of buying power through group purchasing will enable both companies to purchase royalties on a more favorable basis than would otherwise be possible.

Arrangements have also been made with The W. E. Brown Company, heretofore one of the successfully operated royalty brokerage concerns in the Mid-Continent area, whereby Tristate Royalty Corporation will acquire the good will and royalty brokerage Business of this firm without the transfer or exchange of any physical assets.

MANAGEMENT AND POLICY:

The management personnel of Tristate Royalty Corporation will consist of experienced, successful geologists, petroleum engineers, oil royalty experts, bankers and business men whose experience and proven ability absolutely qualifies them to pass on the valuation of, or to make investments in, oil and gas royalties.

The management of a well-organized and efficiently operated Royalty Company is not unlike that of any other successful business, and we are certain to profit by the experience of our directors.

The Company has not issued, and will not issue, any of its stock whatsoever, for promotion or services rendered—and all shares issued or to be issued will be paid for in full.

The company's property holdings are restricted to oil royalties and leaseholds, and *will never have any of its capital funds invested in drilling operations or the development of producing properties.*

The Executive Committee, consisting of three members, appointed by the Board of Directors, will pass on the valuations of oil and gas royalty interests and its approval will be required on all purchases made by the Company. The Committee appointed by the Directors to serve for the ensuing year consists of:

W. E. BROWN JOHN G. ELLINGHAUSEN COLER A. YOAKAM

The Geological and Land Departments will be under the direct supervision of Coler A. Yoakam, who was previously associated with the Atlantic Oil Producing Company (a Standard Oil subsidiary) and more recently head of the Geological department of the Sinclair Oil & Gas Company—a position which he resigned to become affiliated with Tristate Royalty Corporation.

Respectfully submitted,

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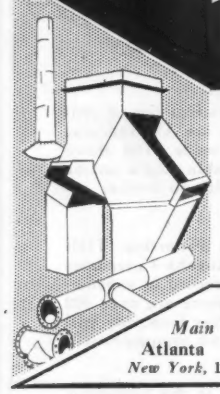

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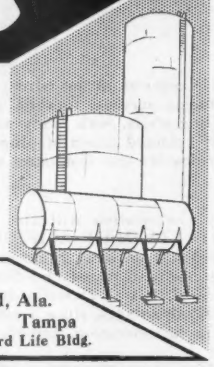

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all petroleum products were even lower than they were in 1927, which we had all regarded as a bad year, but as we market this wider range of products we are able to avoid to some extent the greater decline which naturally occurs in the prices for basic products. When I say 'we market,' I refer, of course, to our selling agents, the Shell Co. of Egypt, who continue to merit our warmest thanks by their energetic and successful efforts in our behalf, and by their ever-valuable advice and suggestions as to the products which will earn for us the best remuneration both now and in the future."

The company wrote off £69,452 2s. 1d. as loss on its operations of the Red Sea Petroleum Co. Anglo Egyptian drilled a test on one of the Farsan Islands, which it had previously prospected. This prospecting has now been discontinued. "Before any materials had been moved from the first well," said Sir Reginald, "the constant search for further information brought to light some facts of a regional character which showed that the unknown, albeit slender, prospects of the area were no longer sufficiently promising to justify our sinking more capital in that country. We have thus again been balked in our efforts to find further production against the day—which we think is still far distant—on which the last well is drilled at Hurghada. But while we are deploring the loss, we must not forget that such an amount must be regarded as a comparatively small sum by those who engage in the extremely hazardous business of oil prospecting. In many countries including Egypt, very much larger sums have been lost in oil prospecting work, and, notwithstanding the strides which have been made in the science of petroleum geology, it is quite certain that oil prospecting in the future will continue to be hazardous, even under the best circumstances, and practically hopeless when engaged upon by those who are inexperienced."

Testing Somaliland

While the company has discontinued exploration work in the Farsan Islands, it has diverted its search for new production to Somaliland. Owing to climatic conditions, to date only a small part of the concession area has been inspected. The geologists' reports thus far, according to the company statement, are only rapid reconnaissance reports, and cannot be amplified until later when the expedition has been able to cover the whole area, and the geologists have a better view of the general geology of Somaliland.

Production of crude oil by Anglo-Egyptian in the Hurghada area of Egypt for the last full year amounted to 264,234 tons, within 14,000 tons of the company's record production in 1918. The increase was obtained principally from the northern extension of the field, but increasing production from the main field was also developed. The company has developed a deeper producing horizon in the northern extension of the Hurghada Field, which has been a prolific producer. The northern extension, however, maintains the rather involved character of the main field, and the company is still endeavoring to ascertain the extent of this new deeper level.

The company has also brought in a producer from an oil horizon not previously known on the east side of the main Hurghada Field.

Hurghada Production

Production in the Hurghada area for 1929 is estimated by officials of the company at over 200,000 tons.

The dehydrating plant and gas compression plant operated by Anglo-Persian at Suez are being continually improved by small additions as new methods of operation are discovered either on the local plants or at similar plants in other fields with which the technical staff of the Shell group is in touch.

Considerable new construction work was also carried on at the main refinery at Suez. The company completed the erection of two new Trumble distillation plants of the most up-to-date pattern, and also the reconstruction of two of the older Trumble plants at the Suez refinery. The Anglo-Egyptian distillation

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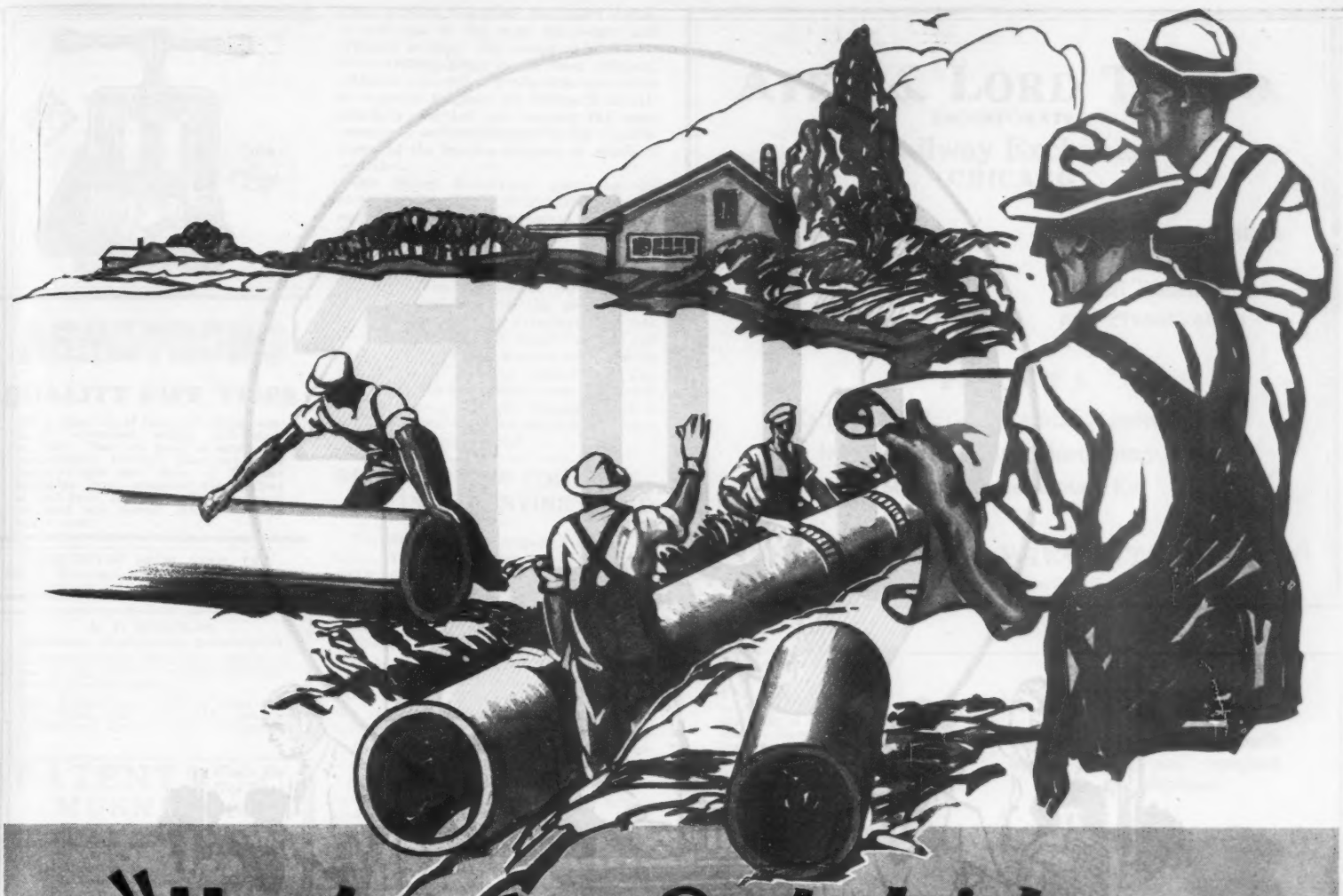

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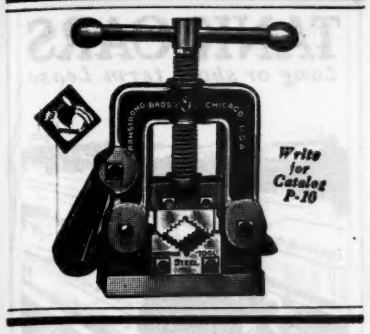

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The Annual Refinery Number

On March 6, 1930, The Oil and Gas Journal will publish its "Annual Refinery Number."

Executives, Engineers, Superintendents, Sales Managers, Chemists and all those primarily interested in the numerous phases of Crude Oil Refining will find a wealth of information of definite value to them in "The Annual Refinery Number."

The OIL and GAS JOURNAL
TULSA, OKLA.

plant at Suez, therefore, the report states, is now one of the most up-to-date and efficient in type. The company has erected a cracking plant at the Suez refinery, which is reported in production and which is expected to place the company in satisfactory position for meeting the comparatively sudden changes in the requirements of the various markets in which it operates.

Sir Henri Deterding, managing director of the Royal Dutch-Shell group, resigned from the directorate of Anglo-Egyptian Oil, being replaced by Heath Eaves, also a director of the Anglo-Persian Oil Co. Announcing the selection of Mr. Eaves on the board, Sir Reginald said: "Shortly before the end of last year the Consolidated Petroleum Co. was formed jointly by the Anglo-Persian and Shell companies to market products in various near eastern countries. The Anglo-Persian is therefore very interested in the progress of your company, and it has been urged that two of their directors should join your board."

ORGANIZE NEW COMPANY IN ARGENTINE FIELD

The Eastern Petroleum & Finance Co., Ltd., with headquarters in London, formerly operating in Argentina, has disposed of its properties in that country to a new company organized in Argentina, "Oriente Compania Argentina de Petroleo."

In summarizing the company's position, Lionel Holland, president of the company, writes: "The outstanding event of the year has been the completion of the arrangement for the sale of this company's properties and plant on the Comodoro Rivadavia Field in the Argentine. The sale was completed during this year to a new company formed in the Argentine under the title of the Oriente Compania Argentina de Petroleo. The properties were transferred to this new company last February, and since February have been managed and operated by the new company.

Financing Basis

"The Oriente company was formed with a capital of 2,300,000 pesos—something over £200,000. Of this capital, some £150,000 is represented by preference shares, to be subscribed for cash, entitled to a non-cumulative fixed dividend of 7 per cent, and one-third of the profits remaining in any year after meeting the fixed preference dividend and the interest at 7 per cent upon an issue of some £50,000 of debentures. The balance of the capital is represented by 800,000 ordinary shares which take the other two-thirds of the profits. We received as the sale price of our properties and plant £41,000 odd cash and half of the ordinary share capital. The syndicate connected with a French banking group that negotiated the transaction with us guaranteed the subscription of the debenture issue and preference shares of the new company, so that it might start with a substantial provision of working capital to enable it to carry on an active development of the Comodoro properties. The Oriente company is working in close co-operation with the Argentina Astra Co., and Mr. Loewenthal, director of the Astra Co., is on the board of the Oriente. We were entitled to nominate two directors, and we had the pleasure of inviting Dr. Uriel O'Farrell, whose assistance has been of such excellent service to this company in the Argentine, and whose firm has been our legal advisors at Buenos Aires, to act as one of these directors, and Mr. Bugge, who served our company as its representative on the Comodoro Field most admirably, to fill the other directorship.

Drilling Program

"We have been informed that the Oriente company has started a vigorous drilling program and we can only hope that it will reap a full reward for its initiative and enterprise and for the considerable capital outlay on the properties that it is undertaking. None of the pioneer wells that our company sank resulted in discovering oil in substantial quantities. When we abandoned the pol-

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icy of direct work and came to a drilling arrangement with the Astra Co., several further wells were drilled and a production in all of something over 21,000 tons obtained, chiefly derived from one well which contributed over 15,000 tons. But, as you know, our expert advisors have never faltered in their favorable view of the value of these properties in spite of the disappointing results that we encountered. The advisors of the group that have supported with substantial financial backing the new Oriente company, must entertain an equally good opinion of the commercial prospects of these areas. I hope, then, that results will justify the increased program of development that is now being pushed forward upon the properties, and that we shall be able to report to you next year that the Oriente Co. is in a fair way to build up a satisfactory commercial production so that our sharenolding in the company may be rendered of value. I hope also that it may be possible to find some other interest in which we can participate, that may assist the company in endeavoring to replace part of the capital that has been sunk in exploratory and development work that proved unsuccessful."

CENTRAL WEST FIELDS

(Continued from Page 66)

Bend area of Greene County by the Keystone Oil Co. on the Ogles farm.

Bowman Oil & Gas Co.'s test on the W. B. Coffing farm in Troy Township, Fountain County, and northeast of Covington, is reported dry.

The Petroleum Exploration Co. and the Ohio Oil Co. is drilling on the F. and L. Deckard farm in Polk Township, Monroe County, and the companies are drilling a deep sand test on the Young heirs, same county, 2,000 feet from the gas well drilled on the Mary E. Shirley farm.

Metzler & Rhodes are drilling a test for the Mich-Ohio Oil Co. on the Brenneman farm in Monon Township, White County, in the western part of the State.

The wildcat under way near Highland in Lake County, and southwest of Gary, in the northwestern part of Indiana, drilled through the Trenton at 1,600 feet, and looks like a failure.

ILLINOIS

The best completion in the Illinois Field was the St. Clair County Oil Co.'s No. 1 in the SW cor. of the Fred Eckert farm, Section 34, Sugar Loaf Township, St. Clair County, which produced an initial of 35 bbls. from Trenton Rock at 643-90 feet. Joseph May drilled a dry hole in No. 1 well, 40 feet from the north line and 1,357 feet from the east line of the Fauerbacher property, Section 17, same township, from 742-67 feet. The Ohio Oil Co. drilled a dry hole on the Wailtie property, Section 33, Stockey Township, same county, from 1,217-68 feet, or 51 feet in the Trenton.

In the Robinson Field of Prairie Township, Crawford County, the Portersville Oil Co.'s second test in the SW cor. of the C. G. Granby farm, NW Section 36, produced an initial of 15 bbls. at a depth of 969 feet.

Owing to the high waters in the raging Wabash River, in Wabash County, nothing is being done in the field, although as soon as conditions better it is announced a few advance wells from production will be drilled.

JOHN R. LOGGIE DIES

John R. Loggie, 54, died February 13 at Wichita Falls. Mr. Loggie had been in the oil business since 1905, following the industry from Ohio, Michigan, Illinois, Oklahoma into Texas and Mexico, and at one time was production superintendent of the Texhoma Oil & Refining Co., being with that company until it was purchased by the Continental Oil Co. in 1926. Since that time he has been in business for himself in Wichita Falls, Tex.

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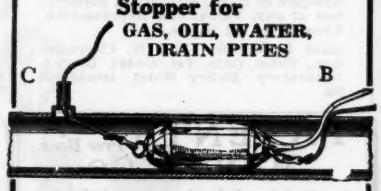

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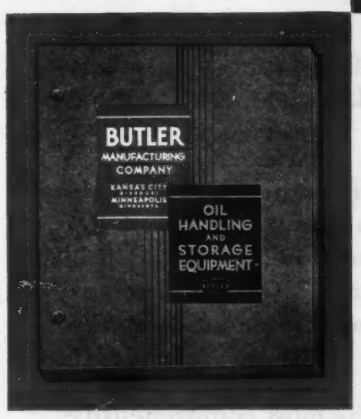

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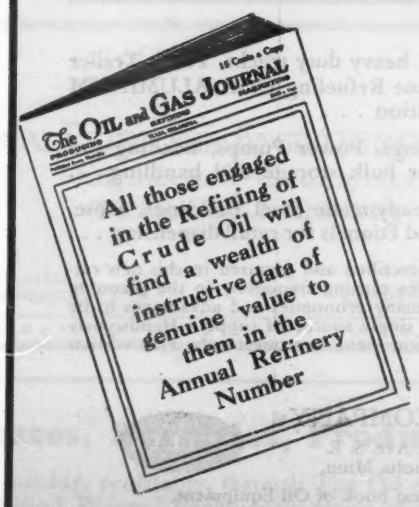
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Detailed Operations in All Fields for Month of January

SUMMARY OF ALL FIELDS
WELLS COMPLETED

Field—	Comp.	Prod.	Dry	Gas
Eastern	329	1,813	18	53
Central Ohio	94	879	25	39
Lima	13	130	4	2
Indiana	17	114	2	8
Michigan	23	4,955	5	0
Illinois	25	390	7	0
Kentucky	61	1,245	15	6
Oklahoma	381	580,301	100	43
Kansas	64	8,610	42	4
Texas Panhandle	36	11,710	6	11
N. Central Texas	265	12,218	127	9
E. Central Texas	10	475	7	0
West Texas	67	40,453	20	0
Southwest Texas	76	30,334	31	15
East Texas	5	....	1	4
Gulf Coast	124	57,958	46	4
North Louisiana	55	517	13	23
Arkansas	12	711	5	0
Mississippi	4	....	4	0
Wyoming	11	941	2	1
Montana	7	194	3	1
Colorado	6	165	4	0
New Mexico	13	6,045	5	0
Total Jan.	1,698	760,158	492	223
Total Dec.	1,880	339,320	585	306
Difference	182	420,838	93	83

RIGS AND WELLS DRILLING

Field—	Rigs	Drlg.	Total
Eastern	143	370	513
Central Ohio	75	175	250
Lima	3	29	32
Indiana	3	39	42
Michigan	52	122	174
Illinois	3	39	42
Kentucky	8	107	115
Alabama	2	4	6
Mississippi	1	16	17
Oklahoma	171	795	966
Kansas	67	258	325
Texas Panhandle	21	119	140
N. Central Texas	111	409	520
E. Central Texas	4	30	34
West Texas	48	243	291
Southwest Texas	46	131	177
East Texas	3	12	15
Gulf Coast	44	191	235
North Louisiana	60	119	179
Arkansas	10	46	56
Wyoming	21	130	151
Montana	18	78	96
Colorado	21	77	98
New Mexico	30	75	105
Utah	4	30	34
Total Jan.	969	3,644	4,613
Total Dec.	927	3,910	4,837
Difference	42	266	224

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	4	306	1	..
Cotton	10	509	..	..
Creek	29	1,319	8	3
Grady	4	...	..	4
Hughes	6	418	1	3
Muskogee	13	315	5	4
Okmulgee	14	51	6	3
Oklahoma	35	428,219	..	..
Okfuskee	10	145	5	2
Osage	14	297	4	2
Pawnee	12	568	3	2
Pontotoc	14	1,226	2	1
Pottawatomie	36	10,579	8	..
Seminole	102	127,304	17	10
Stephens	12	465	5	1
Tulsa	7	27	5	..
Wagoner	6	26	3	1
Miscellaneous	53	8,527	27	7
Total January	381	580,301	100	43
Total December	283	127,327	89	39
Difference	98	452,974	11	4

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Caddo	2	9	11
Carter	6	10	16
Cotton	2	8	10
Creek	12	43	55
Grady	2	3	5
Grant	..	12	12
Hughes	2	14	16
Kay	..	4	4
Logan	..	8	8
Lincoln	1	10	11
Marshall	3	1	14
Muskogee	5	24	29
Oklahoma	25	191	216
Okfuskee	6	29	35
Okmulgee	3	15	18
Osage	10	20	30
Pawnee	5	12	17
Payne	1	15	16
Pontotoc	7	25	32
Pottawatomie	12	54	66
Seminole	43	175	218
Stephens	8	24	32
Tulsa	2	11	13
Wagoner	4	9	13
Miscellaneous	10	59	69
Total January	171	795	966
Total December	140	855	995
Difference	31	60	30

WELLS COMPLETED
CARTER COUNTY

23-1s-3w W. W. Martin, Magnolia Pet. Co. 2 ... 23
30-1s-3w Dixon, Ven Mex Oil Co. 1 .. 268
Pierce, Ven Mex Oil Co. 1... dry
10-4s-2w Rexroat, Cotton Belt Oil Co. 10 15

Wells completed ... 4
Production ... 306
Dry ... 1

COTTON COUNTY

35-1s-10w Chambers, Wirt Franklin Pet. Corp. 6 ... 30
2-2s-10w Slogan, Shasta Oil Co. 10.. 125
Slogan, Shasta Oil Co. 11.. 200
33-1s-10w Bills, Barnsdall Oil Co. 16.. 10
Rhone, Baldwin & Sultan 6 45
35-1s-10w McCombs, Wirt Franklin Pet. Corp. 2 ... 4
31-1s- 9w Tan-Nah, Shasta Oil Co. 1.. 7
1-2s-10w Whitehead, Shasta Oil Co. 1 34
2-2s-10w Chambers, Silurian Oil and Perkins & Collum 4 ... 42
Burneaugh, Shasta Oil Co. 3 12

Wells completed ... 10
Production ... 509

CREEK COUNTY

25-19- 8 Reabe, Gled Oil Co. 1 ... 8
24-19- 9 Narharky, William Sherry and others 2 ... dry
20-18- 9 Grayson, Jackson & Wise 1.. 280
21-17- 9 Harjoche, Texas Pacific Coal & Oil Co. 1 ... 10
23-17- 9 Goodman, H. L. Skelly and C. O. Buckles 1 ... dry
26-16-10 Sewell, The Texas Company 1 dry
12-15- 9 Clinton, William Sherry and F. B. Murta 1 ... dry
20-19- 9 Koch, Phillips Pet. Co. et al 3 90
23-18- 8 Jackson, H., & Bartlett 1 .. gas
31-18-11 Colvin, E. P. Harwell et al 1 gas
14-17- 8 Johnson, Pawnee Prod. Co. 5 5
19-17-10 Wanake, A. B. Ice 5 ... 2
20-17-10 Brown, Emerson, Berry & McCoy 1 ... 45
21-16-11 Hughes, S. J. Mathews 1-A.. gas
6-14-10 Johnson, Wilcox O. & G. Co. 1 20
26-13-12 Roberts, Jones et al 1 ... dry
35-15- 7 Sheppard, the Prairie O. & G. Co. 2 ... 50
14-17-10 Baker, The Texas Company 6 35
35-17-10 Fulsom, Hemlock Oil Co. 1.. dry
21-16- 8 Parks, Darby Pet. Corp. 3... 437
15-14- 8 Smith, Independent O. & G. Co. 6 ... 200
27-18- 8 Brown, J. W. Merritt et al 2 30
27-17- 7 Eagle, Magnolia Pet. Co. et al 10 ... 2
15-16- 9 Williams, Transcontinental Oil Co. 1 ... 30
17-19- 9 Grayson, Operators Oil Co. 4 30
27-18-11 Mathews, W. S. O'Hair and Foster 1-A ... dry
29-18-11 Bruner, Iron Mountain Oil Co. 1 ... dry
36-15- 7 Bigpond, Empire O. & R. Co. 3 ... 20
30-15- 9 Connesseny, C. G. Tibbens 4 15

Wells completed ... 29
Production ... 1,319
Dry ... 8
Gas ... 3
Gas production ... 6,500,000

GRADY COUNTY

35-5-8w Dryden, Magnolia Pet. Co. 4 gas
36-4-8w Short, Meridian Gas Co. 5 .. gas
35-5-8w Smith, Magnolia Pet. Co. 10.. gas
36-4-8w Short, Meridian Gas Co. 4 .. gas

Wells completed ... 4
Gas ... 4
Gas production ... 26,000,000

HUGHES COUNTY

4-8- 9 Jimboy, Superior Oil Corp. and Amerada Pet. Corp. 2 13
5-8-11 Bird, Trout et al 2-A ... gas
17-5- 8 Davis, D. B. Pine 1 ... 405
Reed, Magnolia Pet. Co. 6 ... gas
6-8- 9 Welch, W. B. Pine 2 ... dry
28-9-10 Brooks, Inglehart et al 1 .... gas

Wells completed ... 6
Production ... 418
Dry ... 1
Gas ... 3
Gas production ... 35,500,000

MUSKOGEE COUNTY

28-16-15 Wheat, John Aggas 2 ... 65
34-15-18 Dean, Arthur Oil Co. 1-A .. gas
12-13-18 Agnew, C. F. Davis et al 1... dry
15-13-18 Foreman, E. Mills et al 2 ... gas
29-13-19 Pickard, W. F. Sessions et al 1 dry
33-16-15 Richards, Mack Drlg. Co. 2.. 75
9-15-17 Grimmett, J. A. Foltz et al 1 dry
8-13-16 Jackson, Mazda Oil Co. 5 .. 125
13-13-18 Smith, H. D. Johnston et al 2 gas
7-15-15 Jefferson, J. R. Parks 1 ... dry
8-15-15 Barnett, Babcock Brothers 3 50
9-15-15 Grayson, Bryan Pet. Co. 2.. dry
14-13-18 C. Jordan, E. Mills et al 4.. gas

Wells completed ... 13
Production ... 315
Dry ... 5
Gas ... 4
Gas production ... 3,500,000

OKMULGEE COUNTY

19-15-13 Depriest, Campbell & Cochran 1 ... dry
34-14-11 Scott, T. E. Wheeler & Evans 2 ... dry
12-14-14 Adams, C. V. Prince et al 7 6
9-13-14 Fee, J. E. Hennessey 1-A .. 15
33-16-11 Peters, Sheridan Oil Co. 4... dry
5-15-13 Sugar, J. H. Rebold 1 ... dry
24-14-12 Warner, I. M. Levine et al 2 gas
17-15-13 Carr, Kirkland & Son 2 ... 10
36-15-14 Scott, J. A. Swindler 3 .... gas
20-12-13 Burgess, Morrison & Eberly 2 gas
Silspee, Morrison & Eberly 2 8
26-14-14 Flint, J. L. Selby 17 ... dry
19-13-15 Sampson, C. B. McCrory et al 1-A ... dry
29-13-12 Palmer, Sunray Oil Co. 1 ... 12

Wells completed ... 14
Production ... 51
Dry ... 6
Gas ... 3
Gas production ... 5,250,000

OKLAHOMA COUNTY

13-11-3w Fuzzell, I.T.I.O. et al 1 43,557
Trosper, I.T.I.O. et al 2 19,722
Trosper, I.T.I.O. et al 3 8,627
Verne, I.T.I.O. et al 2 33,049
23-11-3w Mollman, Mid-Kansas Oil Co. 1 ... 1,476
24-11-3w Olds, Coline Oil Co. 2 4,716
Olds, Coline Oil Co. 3 12,197
Fortson-Farley Consolidated, I.T.I.O. et al 2 42,584
E. Fortson, I.T.I.O. et al 1..16,160
Fortson, Mid-Kansas Oil Co. 4 3,242
Fortson, Mid-Kansas Oil Co. 5 6,256
Foster, I.T.I.O. et al 1 742
Speegle et al, I.T.I.O. et al 1 1,298
Williamson-Canfield, I.T.I.O. et al 1 ... 178
25-11-3w Watters, I.T.I.O. et al 2 ... 1,420
36-11-3w School Land, Sinclair O. & G. Co. 1 ... 6,635
18-11-2w Warren, Coline Oil Co. 2 ..25,517
Browning, Mid-Kansas Oil Co. 1 11,575
30-11-2w Kinter, Sinclair O. & G. and Amerada Pet. 2 7,565
Petty, Shell Pet. Corp. 4... 1,218
N. Emmerson, I.T.I.O. et al 1 743
S. Bodine, I.T.I.O. et al 2... 646
19-11-2w Hiddleston, the Prairie O. & G. and T. B. Slick 4 15,795
Hiddleston, the Prairie O. & G. and T. B. Slick 5 11,500
13-11-3w Wheeler, I.T.I.O. et al 1.... 6,747
Jennings, I.T.I.O. 1 24,972
Jennings, I.T.I.O. 2 21,222
Jennings, I.T.I.O. 3 18,307
Zeckerle, T. B. Slick 1 23,973
25-11-3w Johnson, I.T.I.O. et al 2.... 2,135
19-11-2w L. Canfield, I.T.I.O. et al 1..16,948
30-11-2w N. Emmerson, I.T.I.O. et al 2 2,415
Stamper, Sinclair O. & G. Co. 4 495
Stamper, Sinclair O. & G. Co. 6 1,750
31-11-2w Hoopes, Skelly Oil Co. 1 ..32,832

Wells completed ... 35
Production ... 428,219

OKFUSKEE COUNTY

16-10-11 Fier, the Prairie O. & G. Co. 1 dry
21-10-11 Buckley, Holm & Jarvis 2 .. 75
23-11-11 Grayson, F. A. Havell et al 1 25
4-11-12 Hawkins, Schoenfeldt et al 5 dry
17-11-12 French, Eagle-Picher Lead Co. 5 ... gas
32-12-10 Simmers, Continental Oil Co. 1 45
20-10-11 Catlett, McCulloch et al 1 .. dry
30-12- 9 Barnett, Tidal Oil Co. et al 1 gas
10-11-12 Rogers, H. H. Diamond Oil Co. 1 ... dry
15-11-11 Carter, Champlin O. & R. Co. 1 ... dry

Wells completed ... 10
Production ... 145
Dry ... 5
Gas ... 2
Gas production ... 3,750,000

OSAGE COUNTY

20-29- 9 Winona Oil Co. 9 ... 25
17-23-12 Silurian Oil Co. 58 ... 30
22-22-11 Branstetter et al 7 ... 7
34-20-10 Mid-Continent Pet. Corp. 1.. 40
16-28- 8 J. J. Fitzstephens 2 15
34-27- 6 Kewanee O. & G. Co. 10 ... 10
26-27-11 I.T.I.O. 421 ... gas
27-27-11 Peters Pet. Corp. 4 ... 100
10-25- 8 Stanley et al 2 ... dry
15-24- 8 F. J. Carroll 2 ... 70
30-24- 8 Galt Brown Oil Co. et al 1.. dry
8-24- 9 I.T.I.O. 424 ... gas
27-22-10 Barnsdall Oil Co. 6 ..... dry
35-21-11 Oklahoma Natural Gas Corp. 1,748 ... dry

Wells completed ... 14
Production ... 297
Dry ... 4
Gas ... 2
Gas production ... 6,000,000

PAWNEE COUNTY

24-21-7 Parker, Peter Adamson 4-A .. gas
35-20-9 Wiggs, Roy Sears et al 7 250
36-20-6 Bentley, O. O. Owens 1 ..... dry
6-20-8 Little, Foster Pet. Co. 8 210
12-20-8 Gifford, Sheeders et al 1-A ... dry
14-20-9 Mote, Thompson & Black 1 ... dry
15-20-9 Fleming, Thompson & Black 1 gas
26-20-9 Coats, C. C. Chamberlain 2 ... 8
26-20-9 Copeland, Hay et al 4 25
25-21-8 Green, Capitol Hill Oil Co. 2.. 20
6-20-8 Cotton, Martin et al 6 40
White, West & Brewer 1-A .. 15

Wells completed ... 12
Production ... 568
Dry ... 3
Gas ... 2
Gas production ... 4,000,000

PONTOTOC COUNTY

13-5-4 Cotton, Dixie Oil Co. 1 40
19-5-5 Norris, Empire O. & R. Co. 4 .. 45
Robertson, American O. & R. Co. 4 ... 60
31-5-5 Lowery, Benedum-Trees Oil Co. 2 100
32-5-5 Haynes, Dixie Oil Co. 1 144
25-5-6 Crueger, Universal Oil Co. 3 ... gas
25-5-4 Hicks, Denver P. & R. Co. 1 167
30-5-5 Hatcher, Texas Pacific C. & O. Co. 2 ... 145
36-5-6 Broughton, Universal Oil Co. 3.. 20
Broughton, Royalty O. & R. Co. 2 5
3-4-8 Bushy, Homaokla Oil Co. 1 .... dry
32-5-7 Oliver, Belchic & Laskey 2 .... dry
18-5-8 Milner, W. R. Ramsey 9 300
31-5-5 Lowery, Benedum & Trees Oil Co. 3 ... 200

Wells completed ... 14
Production ... 1226
Dry ... 2
Gas ... 1
Gas production ... 8,000,000

POTTAWATOMIE COUNTY

35-8-4 Brandenburg, I. T. I. Oil Co. 1..1210
10-7-3 Motely, Continental Oil Co. 1 .. 310
2-7-4 Weldfelt, Independent O. & G. and Mid-Kansas Oil 2 209
Weldfelt, I. T. I. Oil Co. 3 594
15-7-4 Richardson, Magnolia Pet. Co. 2 375
16-7-4 Pappan, Independent O. & G. and Darby Pet. 3 ... 185
22-7-4 Floyd, Darby Pet. Co. 1 ..... dry
19-6-4 Benham, Simms Oil Co. 1 ..... dry
Townsite, Obermeyer et al 1 380
9-8-5 Jordan, Shell Pet. Corp. 3 680
Jordan, Shell Pet. Corp. 4 367
11-7-4 Willamette, Magnolia Pet. Co. 1. 25
8-9-5 Reade, Healdton O. & G. Co. et al 1 ... 1615
3-8-4 Ray, Twin State Oil Co. 1 ..... dry
8-9-5 Bullock, Empire O. & R. Co. and Amerada Pet. Corp. 3 705
35-8-4 Goodin, The Texas Company 1.. 35
9-8-5 Gossland, Gypsy Oil Co. 3 620
9-7-4 Bewley, Atlantic O. P. Co. and Champlin O. & R. Co. 1 ..... dry
1-7-4 Bodkin, The Prairie O. & G. Co. 1 ... dry
22-7-4 Hilton, Magnolia Pet. Co. 2 440
24-7-4 Coley, Interocean Oil Co. 2 40
25-5-5 Sunday, Superior Oil Corp. et al 1 ... dry
8-9-5 Earlsboro Townsite, Eason Oil Co. 1 ... 595
20-8-5 Green, Magnolia Pet. Co. 4 25
1 7 4 Anderson, Magnolia Pet. Co. 1.. 40
13-7-4 Cherry, Magnolia Pet. Co. 1 21
21-7-4 D. Lynn, Magnolia Pet. Co. 1 ..1138
22-7-4 Ogle, Magnolia Pet. Co. 2 50
8-9-5 Dobbs, Hubbel & Graham et al 1 130
4-8-5 Fehlig, Gypsy Oil Co. 1 ..... dry
9-8-5 Smith, Sinclair O. & G. Co. 2 .. dry
12-7-4 Jordan, Magnolia Pet. Co. 1 ... 187
15-7-4 Mull, Magnolia Pet. Co. 2 30
21-7-4 Latimer, Pure Oil Co. et al 1 .. 173
32-7-4 Meyer, The Prairie O. & G. Co. 1 50

Wells completed ... 36
Production ... 10,579
Dry ... 8

SEMINOLE COUNTY

18-9-6 D. W. Anderson, Magnolia Pet. Co. 4 ... 1147
18-9-6 Panos, Magnolia Pet. Co. 3 .... dry
19-9-6 Scott, Amerada Pet. and Dixie Oil 1 ... 2760
20-9-6 Campbell, McCulloch et al 1 ... dry
4-7-7 Harris, Continental Oil and Shaffer O. & R. 7 ... dry
Scipio, Magnolia Pet. Co. 1 8
Chilcoat, Amerada Pet. Corp. and Dixie Oil 1 ... 1440
18-9-6 Wisner, The Prairie O. & G. Co. 2 dry
19-9-6 Jefferson, Prod. & Ref. Corp. 2..3400
13-7-6 Kouri, The Prairie O. & G. Co. and T. B. Slick 1 ... gas
17-9-6 Noe, Minnehoma Oil Co. 3 2854
17-9-6 Fixico, Burke-Greis Oil Co. 4 .. 65
Calkins, The Prairie O. & G. Co. 4 dry
26-9-6 Fixico, Gypsy Oil Co. 1 45
18-9-7 Thompson "B," Sinclair O. & G. Co. 2 ... 705
25-8-7 Ligon, Ligon et al 1 35
10-9-8 Abel, The Prairie O. & G. Co. 1 dry
24-5-5 Tecumseh, Hoffman et al 1 17
13-5-7 Mathis, I. T. I. Oil Co. 2 420
23-5-7 Jefferson, The Texas Company 3 gas
7-5-8 Fleet, Mid-Continent Pet. Corp. 16 ... 50
13-6-7 Price, Sinclair O. & G. Co. and Kingwood Oil Co. 1 ..... dry
7-6-8 Spillman, Carter Oil Co. 2 985
7-6-8 Davis "A", Sinclair O. & G. Co. 5 ... 65
Davis "A", Sinclair O. & G. Co. 6 ... gas
13-7-6 Bean, W. B. Pine 2 475
24-7-6 Cudjo, Magnolia Pet. Co. 1 .... gas
Dindy, The Texas Company 2.. gas
4-7-7 Chilcoat, The Texas Company 3. 900
8-7-7 Brame, Magnolia Pet. Co. 1 16
Brame, Magnolia Pet. Co. 2 ..... gas
17-9-6 Noe, Minnehoma Oil Co. 2 15
Noe, Minnehoma Oil Co. 4 600
18-9-6 Panos, Magnolia Pet. Co. 2 638
Panos, Magnolia Pet. Co. 4 314
19-9-6 Nichols, Sinclair O. & G. Co. 2..2230
Hopper, Shell Pet. Corp. 3 7446
Chowning, Carter Oil Co. 1 805
20-9-6 Maley, Gypsy Oil Co. 2 2283
23-5-7 Jefferson, Sinclair O. & G. Co. 5 2200
13-7-6 Reed, The Prairie O. & G. Co. 3 610
4-7-7 Harris, Continental Oil Co. and Shaffer O. & R. 8 ... 495
8-7-7 Tiger, The Prairie O. & G. Co. and T. B. Slick 1 ... gas
13-6-7 Fleet, I. T. I. Oil Co. 2 548
3-9-6 Frazier, Carter Oil Co. 7 ..... gas
5-9-6 Nevins, Sinclair O. & G. Co. 1 .. 770
17-9-6 Fixico, Burke-Greis Oil Co. 3 .. dry
Sullivan, Amerada Pet. Corp. 4 .. 605

18-9-6 Payne, Gypsy Oil Co. and Devonian Oil Co. 11 795
Payne, Gypsy Oil Co. and Devonian Oil Co. 12 1472
Noble, Gypsy Oil Co. 3 25
Noble, Gypsy Oil Co. 4 1340
Noble, Barnsdall Oil Co. 5 2389
19-9-6 Nichols, Sinclair O. & G. Co. 3 .. 1915
Nichols, Sinclair O. & G. Co. 4 .. 1630
Nichols, Sinclair O. & G. Co. 5 .. 1860
Hopper, Shell Pet. Corp. 1 4921
Wrightsman, Carter Oil Co. 4 .. 1890
20-9-6 Maley, Gypsy Oil Co. 1 450
15-9-7 Jonah, Blackwell O. & G. Co. 1-A 85
30-9-6 Hull, The Prairie O. & G. Co. 1.. dry
6-8-6 Harjo, W. B. Pine 3 ..... dry
20-8-6 Johnson, Independent O. & G. Co. et al 1 ..... dry
11-7-6 Harjo, Pure Oil Co. 5 1290
13-7-6 Factor, Barnsdall Oil Co. 1 180
8-6-6 Harjoche, E. L. Harris et al 2 .. 1875
9-6-6 Sachemeche, Empire O. & R. Co. et al 1 1225
13-6-7 Bates, Pure Oil Co. 7 1478
Bates, Pure Oil Co. 7 1599
23-5-7 Osborne, Skelly Oil Co. 1 30
18-5-8 Reed, Louisiana O. R. Corp. 6 .. 30
7-9-6 Harber, Carter Oil Co. 1 1755
Harber, Carter Oil Co. 2 775
16-9-6 C. Empire, Carter Oil Co. 1 .... dry
17-9-6 Noe, Minnehoma Oil Co. 5 40
19-9-6 Fullerton, Amerada Pet. Corp. and Dixie Oil 1 8915
19-9-6 Hopper, Shell Pet. Corp. 4 6527
Hopper, Shell Pet. Corp. 5 7701
Hopper, Shell Pet. Corp. 6 5131
Hopper, Shell Pet. Corp. 7 7513
Jefferson, Prod. & Ref. Corp. 3.. 3000
8-9-6 Wilson, The Prairie O. & G. Co. and T. B. Slick 1 120
19-9-6 Magruder, The Texas Co. 3 4035
20-9-6 L. Fixico, Independent O. & G. and Atlantic 1 3825
Campbell, Carter Oil Co. 1 4845
18-9-7 Perry, Continental Oil and Sinclair O. & G. 3 175
2-8-5 Coker, Carter Oil Co. 4 1345
2-7-6 L. Davis, Independent O. & G. and White Eagle 7 ..... dry
11-7-6 Renton, Gypsy Oil Co. 5 2452
Jackson, Carter Oil Co. 6 ..... dry
Jackson, Carter Oil Co. 7 1330
12-7-6 Coker, Empire O. & R. Co. 4 1250
14-7-6 Hulhoke, Gypsy Oil Co. 12 95
Talley, The Prairie O. & G. Co. 6 gas
23-7-6 Cotcha, Barnsdall Oil Co. 1-A .. 105
24-7-6 Carty, Empire O. & R. Co. 3 ... 1250
5-7-7 Smith, Mid-Continent Pet. Corp. 13 2680
25-6-6 Mingo, The Prairie O. & G. Co. and T. B. Slick 3 ..... dry
25-6-7 Harjo, The Prairie O. & G. Co. and T. B. Slick 1 ..... dry
18-6-8 Patten, I. T. I. Oil Co. 1 ..... dry
Smith, Gypsy Oil Co. 1 1015
8-6-6 Snyder McCulloch Oil Co. 1 .... gas

Wells completed 102
Production 127,304
Dry 17
Gas 10
Gas production 181,964,000

STEPHENS COUNTY

32-1 -8w Spears, Armour et al 5 10
35-1s-8w Smith, Ven Mex Oil and Mid-Continent Oil 3 18
2-2s-8w Houston, Pace & Texhoma Oil Co. 5 17
2-2s-8w Houston, Pace & Texhoma Oil Co. 6 ..... dry
5-2s-8w Pielsticker, Pelwin Oil Co. 1.. 50
19-2s-7w Brown, Medlin et al 1 ..... dry
34-1s-8w Burke, Magnolia Pet. Co. 8 .. gas
15-1s-5w Gross, Mudge Oil Co. 1 ..... dry
11-1s-4w Rucktashel, Carter Oil Co. 2.. dry
11-3s-8w Davidson, Twin State Oil Co. 1 dry
12-1s-4w Hanson, Amerada Pet. Corp. 6 250
Hanson, Amerada Pet. Corp. 7 120

Wells completed 12
Production 465
Dry 5
Gas 1
Gas production 8,000,000

TULSA COUNTY

28-17-14 Childers, L. E. Lockhart et al 1 dry
27-17-13 Hornacker, J. E. Martin et al 1-A 15
9-16-13 Unallotted, Keener O. & G. Co. 1 ..... dry
6-17-13 Oswald, W. E. Brown et al 4-A 12
12-16-13 Cooper, W. O. Dickerson 8 ... dry
12-16-13 Agent, Tidal Oil Co. 2 ..... dry
1-16-15 Rothhammer, Bryan Pet. Co. 1-A ..... dry

Wells completed 7
Production 27
Dry 5

WAGONER COUNTY

25-17-16 McIntosh, C. W. Gillett 7 6
31-18-18 Lewis, J. Bremer et al 1 ..... dry
1-16-15 Rothammer, Bryan Pet. Co. 1. dry
22-16-19 Vann, C. F. Finefield 8 20
3-16-19 Vermillion, Keener O. & G. Co. 1 ..... gas
11-18-15 Luckey, W. C. Hatch 5 ..... dry

Wells completed 6
Production 26
Dry 3
Gas 1
Gas production 100,000

MISCELLANEOUS COUNTIES

Grant County— ....
2-27-3w Webb, Continental Oil Co. 2.. gas
35-28-3w Frantz, Continental Oil and Waggoner 3 ..... gas
36-28-3w Crabb, Champlin O. & R. Co. 1 ..... dry

Jefferson County—
29-6s-5w Seay, Bridwell Oil Co. 2 .... dry
34-6s-5w Seay, O. V. Beck 5 45
Seay, O. V. Beck 6 300

Kay County—
30-28-1 Warren, De Camp et al 1 ..... dry
3-26-3 Hankle, Nickolas & Riggs 1 ... dry

Kiowa County—
25-7-16w Geis, Connor & Son 3 ..... dry
17-6-16w Prough, Alexander et al 1 ... dry
22-6-16w School, John C. Head 1 ..... dry
18-6-16w Foster, Bridewell Oil Co. 2 .. dry
34-7-17w Brazil, W. C. Adams 2 ..... dry
11-6-17w Thompson, C. E. Sossamon 1. dry
17-6-16w Prough, Alexander et al 2 .. dry

Johnston County—
29-1s-7 Lane, Smith & Kinsley 1 ..... dry

Marshall County—
30-5s-6 Marshall, C. B. Goddard Oil Co. 1 ..... dry
14-5s-5 Taliaferro, Bilbo Oil Trust Co. 3 85
13-5s-5 McComas, Cox & Hammon 1 .. 60
14-5s-5 Taliaferro, Bilbo Oil Trust Co. 2 dry
24-5s-5 Null, Bilbo Oil Trust Co. 1 ... 600
30-5s-6 Davidson, Carter Oil Co. 2 77
13-5s-5 McComas, C. B. Goddard Oil Co. 3 75
24-5s-5 Null, F. W. Merrick 1 83
Null, Max Westheimer 1 13

Logan County—
31-19-4w Gardner, J. S. Cosden, Inc. 3..2355
Gardner, J. S. Cosden, Inc. 4 ..1628
Elrod, Skelly Oil and Independent O. & G. 1 187
30-19-4w Storey, Shell Pet. Corp. 3 1021
31-19-4w Williams, Wentz Oil Corp. 3.. dry

Beckham County—
26-9-23w Sheets, White et al 1 ..... gas

Caddo County—
36-6-10w Caddo Rowe, Magnolia Pet. Co. 6 260
Caddo-Rowe, Magnolia Pet. Co. 7 180
31-6- 9w Abernathy, English Drlg. Co. 3 250

Canadian County—
9-14-6w Piatt, A. D. Spear 1 ..... dry

Garvin County—
16-1-3w Harris, Magnolia Pet. Co. 6 .. dry

LeFlore County—
11-5-25 Babb, Sooner O. & R. Co. 1 .... dry
33-7-26 Jackson, G. F. Collins 1 ..... gas

Lincoln County—
17-14-4 Waggoner, Magnolia Pet. Co. 1 230
25-17-3 Meadville, Meade Bros. 2 ..... gas
29-12-3 Robertson, Phillips Pet. Co. 1.. dry
8-14-4 Curry, The Prairie O. & G. Co. 1 dry

Pittsburg County—
9-7-18 Colton, Midwestern O. & G. Co. 1 gas
Huston, Quinton Relief Oil Co. 1 dry
10-7-18 Benedict, Mid-Western Oil Co. 1 gas

Sequoyah County—
12-12-23 Ralph, J. A. Hunt 1 ..... dry

McIntosh County—
21-11-17 Coon, Western Nat. Gas Co. 2 dry

Woodward County—
32-24-17w Simmons, Otstot Dev. Co. 1. dry
25-21-21w Elmore, Sharon Oil Co. 1 ... dry

Atoka County—
1-1-13 Burton, J. W. Earnest 1 ..... dry

Payne County—
9-18-5 Kennedy, Pure Oil Co. 1 450
5-17-4 Sharrum, Mulberry Oil Co. 6 .. 628
25-19-4 Penny, Twin State Oil Co. 1 ... dry

Wells completed 53
Production 8527
Dry 27
Gas 7
Gas production 79,250,000

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	11	430	7	..
Cowley	3	...	2	1
Greenwood	7	837	3	..
McPherson	8	5,120	4	2
Sedgwick	12	2,208	6	..
Miscellaneous	23	15	20	1
Total January	64	8,610	42	4
Total December	82	10,042	37	..
Difference	18	1,432	5	4

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	5	18	23
Cowley	2	22	24
Elk	1	9	10
Ellis	4	6	10
Greenwood	5	27	32
McPherson	24	24	48
Marion	..	10	10
Rice	2	7	9
Russell	4	5	9
Sedgwick	6	14	20
Sumner	..	13	13
Woodson	2	13	15
Miscellaneous	12	90	102
Total January	67	258	325
Total December	46	261	307
Difference	21	3	18

WELLS COMPLETED
BUTLER COUNTY

20-26-5 Koogler, Empire O. & R. Co. 90 40
Koogler, Empire O. & R. Co. 91 50
Koogler, Empire O. & R. Co. 92 305
7-27-4 Neucomb, Lario O. & G. Co. 1.. dry
12-28-3 Kibby, Straub, Dutton et al 1.. dry
18-26-5 Hess, Empire O. & R. Co. 19.. 35
34-23-3 Sires, Valley Osage Oil Co. 1.. dry
36-26-3 Miller, Lario O. & G. Co. 1 .... dry
22-27-3 Harison, E. W. Marland, Inc. 1 dry
28-27-6 Stern, Dixie Oil Co. 1 ..... dry
4-28-3 Abbott, Darby Pet. Corp. and Tidal Oil Co. 1 ..... dry

Wells completed 11
Production 430
Dry 7

COWLEY COUNTY

23-32-3 Oldham, Shawver et al 1..... dry
7-32-5 Biddle, Arkansas Fuel Oil Co. 1 gas
4-30-5 Bell, the Prairie O. & G. Co. 1 dry

Wells completed 3
Dry 2
Gas 1

GREENWOOD COUNTY

22-23-11 Patterson, Phillips Pet. Co. 1.. 142
5-24-13 Sharp, Sheedy et al 5 50
5-24-11 Smith, the Prairie O. & G. Co. 1 dry
27-23-11 Ellis "B," Simmons & Amerada Pet. Corp. 1 250
33-23-11 Peoples, Kite et al 1 ..... dry
9-25-13 Grossarth, Mendenhall et al 3 dry
36-23-11 Patterson "C," Empire O. & R. Co. 5 395

Wells completed 7
Production 837
Dry 3

McPHERSON COUNTY

20-19-4w Wade, Perry et al 1 ..... dry
1-20-2w Miller, Shell Pet. Corp. 1 3,245
9-21-3w Voshel, Mid-Kansas O. & G. Co. 1 1,875
11-19-2w Giffson, Derby Oil Co. 1 ..... gas
11-20-3w Decker, Milmac Oil Co. et al 1 dry
23-18-2w Sorenson, McPherson O. & G. Dev. Co. 1 ..... dry
15-21-2w Fisk, McPherson O. & G. Dev. Co. 1 ..... dry
34-20-3w Kenney, Gypsy Oil Co. 1 ..... gas

Wells completed 8
Production 5,120
Dry 4
Gas 2
Gas production 24,000,000

SEDGWICK COUNTY

14-26-2 Borg, Shell Pet. Corp. 2 264
15-26-2 Fischer, Shell Pet. Corp. 3 ... 188
2-27-1w Peachy, T. C. Johnson 1 .... dry
18-28-1w Schulte, Moore et al 1 ..... dry
1-26-1w Bright, Wentz Oil Corp. 5 43
14-26-2 Hamant, Gypsy Oil Co. 4 440
12-26-1w Wright, Bu-Vi-Bar Pet. Corp. et al 10 700
26-25-1w Undergraff, Reynolds & Rogers et al 1-A ..... dry
1-26-1w Bright, Wentz Oil Corp. 5 .... dry
Bright, Wentz Oil Corp. 6 .... dry
7-26-1w Lyons, Bu-Vi-Bar Pet. Corp. 4 573
17-28-1 Moore, L. H. Wentz 1 ..... dry

Wells completed 12
Production 2,208
Dry 6

MISCELLANEOUS COUNTIES

Chautauqua County—
15-34-8 White, the Prairie O. & G. Co. 1 dry

Elk County—
3-31-8 Ferguson, Ramsey et al 1 .... dry

Coffey County—
28-21-13 Hazelback, Johnson et al 1 .. dry
33-22-14 Fessenden, Cross et al 1 ..... dry
13-23-14 Scott, the Prairie O. & G. Co. 1 dry

Ellsworth County—
16-17-6w Sherman, The Texas Company 1 ..... dry

Morris County—
8-16-7 Kinkle, Arrow O. & G. Co. 1.... dry

Harvey County—
22-23-1w Hupp, Jolly Ogg Pet. Co. and Foster 1 ..... dry
11-24-1w Schowalter, Jolly Ogg Pet. Co. 1 ..... dry
3-23-1w Prouty, McCulloch et al 1 .... dry

Rush County—
17-19-17w Pivonka, Danciger et al 1 .... dry

Stevens County—
29-33-36w Carpenter, Argus Gas Co. 1.. gas
3-35-38w Grundy, Trees Oil Co. 1-A .. gas

Lyon County—
16-17-10 Boche, Gordon & Stars 1 .... dry
7-24-1w Moulds, Independent O. & G. Co. and Reserve Oil Co. 1.. dry

Chase County—
24-20-9 Newman, Empire O. & R. Co. 1 dry

Rice County—
29-19-7w Cain, Milmac Oil Co. and Stack et al 1 ..... dry
2-20-9w Darling, Miller & Dietrich 1 .. dry

Sumner County—
12-33-1 Armstrong, Shell Pet. Corp. 1.. dry
9-20-2w Latta "B," Champlin O. & R. Co. 4 ..... dry
27-34-2 Swartz, Davis & Harold Pet. Co. 2 15

Ellis County—
9-13-9w Johnson, Mid-Kansas O. & G. Co. 1 ..... dry

Reno County —
36-25-4w Beltz, Empire O. & R. Co. 1..dry

Wells completed 23
Production 15
Dry 20
Gas 3
Gas production 18,250,000

PANHANDLE FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	4	680	1	1
Gray	16	10,550	2	2
Moore	2	0	1	1
Hutchinson	6	480	1	0
Motley	1	0	1	0
Wheeler	6	0	0	6
Potter	1	0	0	1
Total Jan.	36	11,710	6	11
Total Dec.	33	20,327	5	11
Difference	3	8,617	1	0

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	5	15	7	27
Gray	9	33	21	63
Hutchinson	5	6	9	20
Moore	1	2	2	5
Wheeler	1	6	3	10
Miscellaneous counties	0	11	4	15
Total Jan.	21	73	46	140
Total Dec.	22	39	79	140
Difference	1	34	33	0

WELLS COMPLETED
CARSON COUNTY

E. Cooper, Gulf Prod. Co. 5 355
B. F. Block, Continental Oil Co. 2 325
S. B. Burnett, Empire Gas & Fuel Co. 22 gas
C. R. Garner, Phillips Pet. Co. 1 ..... dry

Completions 4
Production 680
Dry hole 1
Gas wells 1
Gas production 32,000,000

GRAY COUNTY

Purviance et al, British American Oil Co. 2 ..... dry
G. H. Saunders, Gulf Prod. Co. 3 500
G. H. Saunders, The Texas Company 13 gas
J. E. Wright, Magnolia Pet. Co. 1 1006
Cook-Faulkner, Operators Oil Co. 6....1000
H. B. Lovett, Operators Oil Co. 1 35
S. Faulkner, White Eagle et al 3 1600
C. T. Taylor, Stogner & Meadors 1 .... dry
G. H. Saunders, The Texas Company 17. 952
G. H. Saunders, The Texas Company 19. 72
Cook-Faulkner, Danciger & Champlin 3.2400
G. H. Saunders, The Texas Company 16 405
Barrett, Quillion et al 1 ..... gas
G. H. Saunders, The Texas Company 18 95
Harrah (McKinney), Alexander & Shell 1 85
Cook-Faulkner, Operators Oil Co. 7 2400

Completions 16
Production 10,550
Dry holes 2
Gas wells 2
Gas production 97,000,000

MOORE COUNTY

J. J. Perkins et al-A, Amarillo Oil Co. 1 gas
Anthony, Dana Oil & Gas Co. 1 ..... dry

Gas production 30,000,000

HUTCHINSON COUNTY

J. L. Moore, Holmes & Nublock 1 150
J. L. Moore, Midwest Expl. Co. 3 140
C. M. Jasper, Cates & Jones 1 40
Johnson Bros., C. B. Penny 2 10
Johnson Bros.-Hood, Phillips Pet. Co. 1 dry
E. Cockrell, Travelers Oil Co. 2 140

Completions 6
Production 480
Dry holes 1
Gas production 7,000,000

MOTLEY COUNTY

Matador Land & Cattle Co., Expl. Co. of Texas 5 ..... dry

WHEELER COUNTY

I. Close, Martin & Debous 2 ..... gas
Simms, Lone Star Gas Co. 1 ..... gas
W. L. Cooper, Murchison & Fain 1 .... gas
I. Close, Holmes et al 2 ..... gas
Ackley, Vaughan et al 3-A ..... gas
Gooch, Upham Gas Co. 8 ..... gas

Completions 6
Gas wells 6
Gas production 210,000,000

POTTER COUNTY

R. O. Allison-A, Canadian River Gas Co. 1 ..... gas

Gas production 32,000,000

WEST TEXAS FIELDS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Crane	4	4,666	0	0
Crockett	2	270	1	0
Ector	1	469	0	0
Fisher	2	0	2	0
Glasscock	2	530	0	0
Howard	19	3,888	0	0
Jones	1	0	1	0
Kimble	1	0	1	0
Loving	1	552	0	0
Nolan	1	0	1	0
Pecos	20	29,257	9	0
Reeves	1	0	1	0
Runnels	1	0	1	0
Sterling	1	0	1	0
Sutton	1	0	1	0
Taylor	1	125	0	0
Tom Green	1	0	1	0
Upton	5	614	0	0
Ward	2	82	0	0
Total Jan.	67	40,453	20	0
Total Dec.	85	76,663	25	0
Difference	18	36,210	5	0

Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Crane	2	0	8	10
Crockett	0	2	3	5
Fisher	1	2	0	3
Glasscock	3	4	4	11
Howard	9	8	28	45
Irion	2	5	3	10
Jones	0	4	1	5
Pecos	15	15	39	69
Reagan	1	0	12	13
Runnels	0	2	0	2
Upton	1	1	5	7
Ward	3	2	15	20
Winkler	0	2	3	5
Miscellaneous	11	44	31	86
Total Jan.	48	91	152	291
Total Dec.	55	74	186	315
Difference	7	17	34	24

WELLS COMPLETED
CRANE COUNTY

J. T. McElroy, Gulf Prod. Co. 57 (second completion) 70
J. T. McElroy, Gulf Prod. Co. 70 130
Weekley-University, Warner-Quinlan Co. 6 391
Weekley-University, Warner-Quinlan Co. 7 4075

Completions 4
Production 4666

CROCKETT COUNTY

J. M. Shannon, T. P. Coal & Oil Co. 1.. dry

J. M. Shannon (Lease 3), The California Co. 1 370

Completions 2
Production 270
Dry holes 1

ECTOR COUNTY

R. L. York, Humble O. & R. Co. et al 1 469

FISHER COUNTY

Cooper, Landreth Prod. Co. 2 ..... dry
First Natl. Bank of Waco, Roeser & Pendleton and Amerada 1 ..... dry

Completions 2
Dry holes 2

GLASSCOCK COUNTY

R. C. Coffee, Lion Oil Ref. Co. 1 130
R. C. Coffee, Lion Oil Ref. Co. 3 400

Completions 2
Production 530

HOWARD COUNTY

W. R. Settles-B, American Maracaibo Co. 2 400
H. R. Clay, Gulf Prod. Co. 9 75
H. R. Clay, Humble O. & R. Co. 6 98
Dora Roberts, Magnolia Pet. Co. 13 .. 287
H. R. Clay-C, Midwest Expltn. Co. 5 .. 90
Dora Roberts-B, Moody Corp. 29 25
Dora Roberts-B, Moody Corp. 32 65
Kloh & Rumsey, Shell Pet. Corp. 2 962
H. R. Clay-E, Continental Oil Co. 3 ... 60
Dora Roberts-B, Moody Corp. 14 12
Dora Roberts-B, Moody Corp. 31 65
Dora Roberts-D, Moody Corp. 5 60
Dora Roberts, Lease 1, The California Co. 4 808
A. J. Hooks, Godley Oil Co. 17 125
Dora Roberts, Merrick & Bristow 10 ... 75
H. R. Clay-I, Continental Oil Co. 2 50
H. R. Clay, Humble O. & R. Co. 7 156
H. R. Clay, Humble O. & R. Co. 8 450
H. R. Clay, Merrick & Lamb 11 25

Completions 19
Production 3888

JONES COUNTY

Minter, Mid-Texas Oil & Gas Co. 1 .... dry

KIMBLE COUNTY

Amberson, Lindsey Bros. et al 1 ..... dry

LOVING COUNTY

Jim Wheat, Independent O. & G. Co. 1. 552

NOLAN COUNTY

R. R. Plunkett, Phillips Pet. Co. 1 .... dry

PECOS COUNTY

J. C. and D. H. Cunningham, Humble O. & R. Co. 1 ..... dry
J. H. Tippett (Sun), Cardinal Oil Co. 1. dry
J. H. Tippett (Tidal), Cardinal Oil Co. 1 ..... dry
University-A, Continental Oil Co. 3 25
J. C. and D. H. Cunningham, Dittman Drlg. Co. et al 1 ..... dry
University-D, Landreth Prod. Corp. 3 .. 27
Ely Smithpeter, Landreth Prod. Corp. et al 1 ..... dry
M. A. Sherbino, M. M. Rowan 1 ..... dry
University, Taylor-Link Oil Co. 9 32
C. Graef, The Texas Company 1 ..... dry
University-A, Landreth Prod. Corp. 1..1692
University-A, Landreth Prod. Corp. 4.. 689
University-A, Landreth Prod. Corp. 7.. 345
Jennie L. Sullivan, Moncrief & Turman 1 ..... dry
University, Taylor-Link Oil Co. 6 597
University, Taylor-Link Oil Co. 11 55
I. G. Yates, Gulf Prod. Co. 26 25,728
J. H. Tippett, Cardinal Oil Co. 1 ..... dry
J. Masterson, Cranfill & Reynolds 1 .. 27
University-A, Landreth Prod. Corp. 6.. 40

Completions 20
Production 29,257
Dry holes 9

REEVES COUNTY

Kloh & Rumsey, Southern Crude Oil Pur. Co. 1 ..... dry

RUNNELS COUNTY

Wood, Gibson & Johnson 1 ..... dry

STERLING COUNTY

Harry Tweedle, Sherwood B. Owens 1. dry

SUTTON COUNTY

Allison, Independent O. & G. Co. and Sun Oil Co. 1 ..... dry

TAYLOR COUNTY

Lowe, Adams, Ferguson & Hobbs 1 125

TOM GREEN COUNTY

Lewis & Wardlaw, Fuhrman Pet. Corp. 1 ..... dry

UPTON COUNTY

R. Ricker, Humble O. & R. Co. 13 176
J. T. McElroy, Gulf Prod. Co. 69 135
J. F. Lane-A, T. P. Coal & Oil Co. 14.. 43
John F. Lane, T. P. Coal & Oil Co. 1.. 135
Milton Shirk, Texon Oil & Land Co. 2 125

Completions 5
Production 614

WARD COUNTY

S. F. Hayzlett, Atlantic & Delmar 6 .. 60
S. F. Hayzlett, Shipley et al 3 22

Completions 2
Production 82

EAST TEXAS

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Camp	0	0	0	0	0	1	1
Panola	5	0	1	4	3	6	9
Red River..	0	0	0	0	0	3	3
Shelby	0	0	0	0	0	2	2
Total Feb.	5	0	1	4	3	12	15
Total Jan.	10	0	2	8	4	12	16
Difference	5	0	1	4	1	0	1

*Gas production 20,612,000 feet.

WELLS COMPLETED
PANOLA COUNTY

E. F. Mitcheson Sur.; Werner, Ark.-La. P. L. Co. 9 ..... gas
B. C. Jordan Sur.; Brumbles, S. H. Gardner 5 ..... gas
Thomas Lawless Sur.; D. W. Scott, The Texas Company 1 ..... dry
Jane Thorpe Sur.; Tiller, Magnolia Pet. Co. 5 ..... gas
B. C. Jordan Sur.; Roquemore, Nat. Gas. Prod. Co. 11 ..... gas

Wells completed 5
Gas 4
Gas production 20,612,000

MISSISSIPPI
HINDS COUNTY

13-15-1e Edwards House (Jackson Townsite) Harry Gerson (Drk) .. abd

RANKIN COUNTY

13-15-1e Rainey, Home Oil Prod. Co. 1 dry

YALOBUSHA COUNTY

20-11-5 James, Philips Brothers 1 .... dry

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	31	721	18	0
Baylor	4	378	1	0
Brown	37	1,092	20	1
Callahan	9	0	7	2
Clay	3	0	3	0
Coleman	22	605	13	2
Cooke	6	70	5	0
Eastland	9	120	4	1
Erath	2	0	2	0
Haskell	2	0	2	0
Jack	7	715	1	0
McCulloch	1	0	1	0
Montague	2	46	0	0
Palo Pinto	3	194	0	1
San Saba	1	0	1	0
Shackelford	23	208	14	0
Stephens	6	150	2	1
Throckmorton	2	0	1	1
Wichita	28	848	13	0
Wilbarger	27	4,416	5	0
Young	40	2,655	14	0
Total Jan. 30	265	12,218	127	9
Total Dec.	294	15,028	155	9
Difference	29	3,810	28	0

Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Archer	12	26	10	48
Brown	11	14	12	37
Callahan	4	11	8	23
Coleman	7	18	15	40
Cooke	6	21	0	27
Clay	0	3	0	3
Eastland	6	22	4	32
Erath	2	6	2	10
Haskell	0	0	0	0
Jack	9	11	6	26
Montague	0	4	0	4
Palo Pinto	2	8	3	13
Shackelford	1	8	8	17
Stephens	2	6	7	15
Throckmorton	3	3	1	7
Wichita	7	14	12	33
Wilbarger	11	54	13	78
Young	19	34	12	65
Miscellaneous counties ..	9	26	7	42
Total Jan.	111	289	120	520
Total Dec.	96	109	318	523
Difference	15	180	198	3

WELLS COMPLETED
ARCHER COUNTY

Ferguson, Burns & Long 10 ..... dry
Harmel, W. R. Duke et al 1 ..... dry
Young-D, Pandem Oil Corp. 2 140
Wilson-A, Barnsdall Oil Co. 9 130
Turbeville, Burns & Long 8 38
T. B. Wilson, Hedrick-Camp. Drlg. Co. 2 ..... dry
Carson, Producers Drlg. Co. 1 ..... dry
R. O. Prideaux, Atlantic Oil Prod. Co. and Johnston 3 ..... dry
J. M. Collins, Burns-Long & Grebin 1.. dry
McClure-B, Clark & Douglas Oil Co. 1. dry
Richardson, L. H. Cullum et al 1 ..... dry
Walsh, Gilliland & Rosser 1 ..... dry
Easterling-B, F. C. Grebin 1 ..... dry
Deitrich, Magnolia Pet. Co. 6 63
Richardson, J. H. Massie 1 ..... dry
Justice, McLaughlin Bros. 1 12
Taylor, A. P. Nicholson 1 ..... dry
Turbeville, Burns & Long 9 91
Meade estate-A, Apple & Brandeberry 6 dry
Falls County-fee, Cullum et al 4 70
Portwood, Wayne King 1 15
Richardson, Lawson-Duke et al 3 40
Dupriest, Shell Pet. Corp. 1 46
McCrory, trustee, Rayzor & Akin 1 .... dry
Garvey, Jack Clark 1 ..... dry
Portwood-E, Consolidated and Pet. Prod. Co. 1 ..... dry
Schlegel, Junker & Perkins 1 ..... dry
Scott, Moran Drlg. Co. and Independent O. & G. Co. 3 18
Prideaux-E, Panhandle Ref. Co. 12 3
Richardson, Ramming & Wilson 1 .... dry
Young, Pandem Oil Corp. 4 55

Completions 31
Production 721
Dry holes 18

BAYLOR COUNTY

Turbeville, Douglas Oil Co. 1 ..... dry
Portwood, Consolidated Oil Co. et al 5. 125
Portwood, Consolidated Oil Co. et al 6. 228
Portwood, United Prod. Co. 1 25

Completions 4
Production 378
Dry holes 1

BROWN COUNTY

Scott, Hart Pet. Co. 1 ..... dry
George, E. L. Smith Oil Co. 14 50
Gaines, Tylee et al 1 ..... dry
Riordan, Mac. T. Anderson 1 8
Barnes, Combs, Rogers et al 1 ..... gas
Guyer, Paramount Oil Royalties 1 .... dry
Truehart, Arcadia Ref. Co. 1 24
Bull, Cranfill & Reynolds 3 50
Fry, Phil French et al 1 ..... dry
Mauldin, McGahhey et al 1 ..... dry
Whiteside, S. B. Owens, Inc. 2 200
Johnson, The Texas Company 6 120
Truehart-C, Arcadia Ref. Co. 4 ..... dry
Hickman, Young Bros., Alexander & Woodley Pet. Co. 24 180
Hill, J. H. Green 1 ..... dry
Fitzgerald, W. H. Hammon 1 ..... dry
Trammel, Mac. T. Anderson 3 (formerly No. 1) 12
Cannon-A, Anna B. Gordon 6 8
Allgood, Hart Pet. Co. 1 ..... dry
Carter, Humble O. & R. Co. 2 5
Cannon, S. B. Owens, Inc. 3 25
Spivey heirs, George W. McClung 2 .... dry
Belvin, Darby Pet. Co. 6 100
George, Duffy et al 1 150
Mullins, McGahhey et al 1 ..... dry
Whiteside, S. B. Owens, Inc. 4 ..... dry
Stone, Phillips Pet. Co. 1 ..... dry
Byler, Shoup, Jr. 10 ..... dry
L. A. George, E. L. Smith Oil Co. 28 .. 70
L. A. George, E. L. Smith Oil Co. 29 .. 50
Butler, Venmex Oil Co. 2 ..... dry
Nunn, Cross Cut Corp. 1 ..... dry
Lewis, Mitcham, Preston et al 1 ..... dry
Whiteside, Owens, Inc. 3 40
Mitcham, Wentz (Oil Division) 2 ..... dry
Gwathney, Buras et al 1 ..... dry
Guyer, Paramount Oil Royalties 2 .... dry

Completions 37
Production 1092
Dry holes 20
Gas wells 1
Gas production 2,500,000

CALLAHAN COUNTY

Miller, Kliner et al 1 ..... dry
Jackson, Humble O. & R. Co. 1 ..... gas
Jackson, Union Oil Co. of Nevada 1 .. dry
M. Alexander, Campbell Oil Corp. 1 ... dry
T. A. Irwin, Ellis & Dumas 1 ..... dry
E. L. Finley, Elmo Oil Co. 1 ..... gas
Kennard, Campbell Oil Co. 1 ..... dry
Chrane, Redmond et al 2 ..... dry
George, The Texas Company 1 ..... dry

Completions 9
Production 0
Dry holes 7
Gas wells 2
Gas production 1,050,000

CLAY COUNTY

Wade, F. L. A. Hamilton et al 2 ..... dry
Byers & Co., J. F. Merrick et al 3 .... dry
Stine estate, Saxet Oil Co. 1 ..... dry

Completions 3
Dry holes 3

COLEMAN COUNTY

Baker, Acrey Bros. 1 ..... dry
Hutchings, Jamison, Pollard, Forester et al 1 ..... dry
Pfluger, Kidney, Kamon & Western Exp. Co. 1 37
Stewardson, Tidal Oil Co. 1 150
Buck, Broderick & Calvert 2 ..... dry
Weaver, Broderick & Calvert 4 ..... dry
Crowder, Eastland Oil Co. 2 ..... dry
Sealy & Smith, Gutzman & Aldrich 1.. gas
Ballard, Independent O. & G. Co. 1 .. dry
Morris, Levi Smith 9 100
J. J. Crowder, Permian Oil Co. et al 6. dry
Moss, W. G. Sawyer et al 1 ..... dry
Abernathy, Gwinnup et al 1 ..... dry
Wilkerson, Mitchell & Groves 1 ..... dry
Sealy & Smith, Roth & Faurot 3 ..... dry
Overall-B, Atlantic Oil Prod. Co. 1 ... 203
Sealy & Hays, Hudnal & Pirtle et al 1. dry
G. Rae, Roberts Oil Corp. 1 40
Norton, Dick Barkley 1 ..... dry
Morris, Diana Oil Co. 2 35
Wells, Simpson, White & Pinkerton 1.. gas
Stewardson, Tidal Oil Co. 2 40

Completions 22
Production 605
Dry holes 13
Gas wells 2
Gas production 14,750,000

COOKE COUNTY

Belz, Camp Oil & Gas Co. 1 ..... dry
Huggins, Danciger O. & R. Co. 16 70
Young, C. C. Lanier et al 1 ..... dry
Ramsey, Danciger & Staniforth 1 ..... dry
Wells, Fain-McGaha Oil Corp. 2 ..... dry
McCollum, Seitz-Comegys & Seitz, Inc. 1 ..... dry

Completions 6
Production 70
Dry holes 5

EASTLAND COUNTY

Clark, Gordon 1 ..... dry
Harbin, Hoffman & Page Co. 6 45
Good, Belva Oil Co. 9 40
Rio Bravo, Hopkins et al 1 ..... gas
Scott et al, Ed V. Parsons 1 ..... dry
Reagan, Pitzer & West et al 1 ..... dry
Sneed, Republic Prod. Co. 5 5
Durocher fee, T. P. Coal & Oil Co. 3 .. 30
Lewis et al, Lone Star Gas Co. 1 ..... dry

Completions 9
Production 120
Dry holes 4
Gas wells 1
Gas production 1,803,000

ERATH COUNTY

Bandy, H. J. Wickens 1 ..... dry
Cage, Lone Star Gas Co. 2 ..... dry

Completions 2
Dry holes 2

JACK COUNTY

Raley, C. W. Boller et al 2 70
Rankin, P. F. Gwynn et al 1 25
Eaton & Daniels, Panhandle Ref. Co. 3 385
Shanafelt, Rathke Drlg. Co. and Panhandle Ref. Co. 2 35
Bryson, Republic Prod. Co. 1 ..... dry
Ezell, L. C. Harper 3 150
Box, Shaw Oil Co. 4 50

Completions 7
Production 715
Dry holes 1

McCULLOCH COUNTY

Commercial St. Bank, Lanning et al 1 dry

HASKELL COUNTY

Reynolds, Kouri Shaheen et al 1 ..... dry
Colbert, Weart & York 1 ..... dry

Completions 2
Dry holes 2

MONTAGUE COUNTY

Howard, Continental Oil Co. 27 20
Cunningham-C, Continental & Bridwell Oil Co. 3 26

Completions 2
Production 46

PALO PINTO COUNTY

Vick, Prairie O. & G. Co. and Amerada Pet. Corp. 1 124
Stuart & Sons, T. P. Coal & Oil Co. 164 70
Dalton, Jack Dalton Oil Co. 7 ..... gas

Completions 3
Production 194
Gas wells 1
Gas production 500,000

SAN SABA COUNTY

Winkler, Tylee et al 1 ..... dry

SHACKELFORD COUNTY

Davis, Grisham-Hunter Corp. 5 10
Casey, M. L. Hays 1 10
Scott, Worth Pet. Co. 1 ..... dry
Jackson, F. W. Holder et al 2 ..... dry
Davis-A, Humble Oil & Ref. Co. 5 .... dry
Muse, Klinger et al 1 5
Nail, Sec. 52, Carter Dev. Co. 2 ..... dry
Mathews, Cranfill & Reynolds 2 ..... dry
Nixon, Dyess Hatcher et al 1 ..... dry
Newcomb, Gibson & Johnson 1 ..... dry
Cook, Humble O. & R. Co. 20 55
Green, C. Morton 1 ..... dry
Cutbirth, The Texas Company 1 ..... dry
Mathews-A, Vacuum Oil Co. 15 35
Clark est., Coleman & Stiles 2 14
Jackson-B, Humble Oil & Ref. Co. 1 .. dry
Muse, Klinger et al 2 5
Davis, Sec. 15, Merry Bros. Perini and Tidal Oil Co. 1 ..... dry
Russ-Webb, Big State Oil Corp. 15 .... dry
Clark est., Hart & Gist 5 24
Mathews, Roberts & Pool 1 ..... dry
Lones-A, Simms Pet. Co. 1 ..... dry
Clark est., Worth Pet. Co. 1 50

Completions 23
Production 208
Dry holes 14
Gas production 1,000,000

STEPHENS COUNTY

Caton, Herbert Oil Co. 1 120
Black Bros., The Texas Company 21 .. 15
Harmon, Conway Bros. 13 ..... dry
Mitchell, Heffilin & Bartrug 1 15
Henry, Lone Star Gas Co. 2 ..... dry
Ellis, Lone Star Gas Co. 1 ..... gas

Completions 5
Production 150
Dry holes 2
Gas wells 1
Gas production 2,000,000

THROCKMORTON COUNTY

Leathers, Combest et al 1 ..... dry
Lee, Cranfill & Reynolds 6 ..... gas

Completions 2
Dry holes 1
Gas wells 1
Gas production 1,000,000

WICHITA COUNTY

Jackson, Ascot Co. 3 ..... dry
Crudup, Star Drilling Co. 3 48
Kemp & Kempner-B, Arkansas Fuel Oil Co. 35 54
Warren, H. Hobbs 1 58
Kemp & Kempner, McCarty Oil Co. 20 84
Burnett-A, Panhandle Ref. Co. 12 5
Obenhaus, Ridgeway 1 ..... dry
Volkart, Sheldon & Jamison 2 80
Warren, Staley & Wynne 1 ..... dry
Parker, Duncan & White 2 ..... dry
Wilkerson et al, Mid-Continent Holding Corp. 10 ..... dry
Kemp & Kempner-B, Arkansas Fuel Oil Co. 36 80
Kemp & Kempner-C, Arkansas Fuel Oil Co. 1 ..... dry
Taylor, Bateman & Dingee 1 ..... dry
Daume, Harris & Peckham 1 ..... dry
Kemp & Kempner, McCarty Oil Co. 21 dry
Barton, E. J. Stump & Co. 1 ..... dry
Schultz, Humble O. & R. Co. 27 30
Kemp & Kempner-B, Arkansas Fuel Oil Co. 37 103
Munger-A, Continental & Hammond 3. 97
Taylor, Humble O. & R. Co. 79 125
Moeller, Sheldon & Venmex 1 5
Robinson, Sheldon & Venmex 2 40
Waggoner Bros., The Texas Company et al 13 13
Waggoner Bros., Venmex Oil Co. 23 .. dry
Chilson, Hi-land Oil Co. 3 ..... dry
Neals, Comac and Prairie O. & G. Co. 1 dry
Waggoner Bros., Shappell Oil Co. 1 ... 26

Completions 28
Production 848
Dry holes 13

WILBARGER COUNTY

Waggoner-Sigler, Atlantic Oil Prod. Co. 6 892
Waggoner, Davis Oil Corp. 5 452
Waggoner-B, Empire Gas & Fuel Co. 28 135
George, Martin et al 1 140
Milner, Pigg 1 ..... dry
Waggoner-E, Staley-Wynne & Co. 7 .. 118
Waggoner, The Texas Company 368 ... dry
Waggoner, The Texas Company 369 ... dry
Waggoner-D, Cosden & Co. 5 400
Waggoner-C, Lido Oil Co. 1 187
Waggoner-P, Waggoner Ref. Co. 7 200
Waggoner-C, Bradstreet Co. 5 220
Waggoner-A, Empire G. & F. Co. 21 .. 138
Waggoner-I, Fain-McGaha Oil Corp. 17 112
George, Hi-land Oil Co. 3 250
Waggoner-B, Lewis Prod. Co. 9 40
Waggoner-B, Staley-Wynne & Co. 8 ... 150
Waggoner-G, Staley-Wynne & Co. 17 .. 100
Waggoner-G, Staley-Wynne & Co. 18 .. 96
Waggoner-S, Staley-Wynne & Co. 4 60
Waggoner-D, The Texas Company 5 .. 144
Waggoner-P, Waggoner Ref. Co. 6 300

Waggoner-A, Dixie Oil Co. 2 50
Waggoner-B, Empire Gas & Fuel Co. 27 72
Waggoner-E, The Texas Company 22 .. 160
Waggoner-B, Hoover Scientific Dev. Co. dry
Waggoner, Porter Rankin 1 ..... dry

Completions 27
Production 4416
Dry holes 5

YOUNG COUNTY

Atchley, Lowery et al 3 ..... dry
Winkler, Madden et al 1 ..... dry
Deitrich, Perkins & Cullum 3 150
Keeter, Riggs 1 190
Deitrich, Sun Co. 17 130
Casey, Wootten & Reed 4 ..... dry
Cullers, Bratcher Oil Co. 4 23
Deitrich, Perkins & Cullum 4 125
Deitrich, Sun Oil Co. 18 30
Wolf, Bolin & Lindsey 6 166
Wolf, Bridwell Oil Co. 1 ..... dry
Kunkel, Goldsmith & King Royalty Co. 8 50
Smith, Jones & Sharp 1 ..... dry
Mrs. N. Prideaux-D, Panhandle Ref. Co. 5 ..... dry
Mrs. N. Prideaux-D, Panhandle Ref. Co. 6 11
Mrs. N. Prideaux-D, Panhandle Ref. Co. 7 ..... dry
Mrs. N. Prideaux-D, Panhandle Ref. Co. 8 ..... dry
Hennig, Pet. Producers Co. 9 18
Keeter, Riggs 2 40
Sewell, W. A. Scarborough 1 ..... dry
Carpenter, Stump & Heydrick 1 7
Daniels, Stump & Heydrick 1 60
Deitrich, Sun Oil Co. 19 30
Tucker et al, D. L. Wolf 1 ..... dry
Morgan, Abernathy 1 ..... dry
Kisinger, Christie Bros. 1 300
Mitchell, Prairie Oil & Gas Co. 1 133
Davis, The Bonner Co. 4 ..... dry
Davis, The Bonner Co. 5 ..... dry
Kunkel, Goldsmith & King Royalty Co. 9 46
Leberman, United Producers Co. 1 70
Scott, Pemeta Oil Co. 11 15
Morrison-A, Pitzer & West 6 195
Corbett, Transcontinental Oil Co. 1 392
Kunkel, Atlantic Oil Prod. Co. 1 25
Leberman, E. B. Lawson 1 78
Leberman, E. B. Lawson 2 60
Deitrich, Perkins & Cullum 5 125
Keeter, E. R. Riggs 3 ..... dry
Keeter, E. R. Riggs 4 186

Completions 40
Production 2655
Dry holes 14

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Anderson	2	240	1	0	1	5	6
Angelina	0	0	0	0	0	1	1
Cherokee	0	0	0	0	0	1	1
Freestone	0	0	0	0	0	2	2
Henderson ...	3	0	3	0	0	1	1
Limestone ...	2	0	2	0	0	5	5
Milam	2	200	1	0	1	3	4
Navarro	1	35	0	0	0	1	1
Rusk	0	0	0	0	0	1	1
Van Zandt ...	0	0	0	0	2	9	11
Woods	0	0	0	0	0	1	1
Total Jan. .	10	475	7	0	4	30	34
Total Dec. .	18	6,070	12	1	11	23	34
Difference .	8	5,595	5	1	7	7	0

WELLS COMPLETED
ANDERSON COUNTY

Posey Saline—Birdwell, Humble O. & R. Co. 1 ..... abd
Boggy Creek—Todd, Humble O. & R. Co. 1-B 10

HENDERSON COUNTY

Asher, Humble O. & R. Co. 1 ..... abd
Coleman, Shell Pet. Corp. 2 ..... abd
Coleman, Shell Pet. Corp. 3 ..... abd

LIMESTONE COUNTY

Parks, Fentress & Oliver 1 ..... abd
Forrest, Reiter & Foster 1 ..... abd

MILAM COUNTY

Clemens, Floyd et al 1 ..... abd
Abbott, E. L. Chapman 1 200

NAVARRO COUNTY

Morrow, Haskell & Brooks 1 35

Wells completed 10
Production 475
Abandoned 7

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Mirando	25	350	8	13	13	21	34
Darst Creek .	29	29,384	4	0	12	30	42
Buchanan ...	1	600	0	0	0	0	0
White Point .	1	0	0	1	0	0	0
Kingsville ...	1	0	0	1	0	0	0
Miscellaneous.	19	0	19	0	21	80	101
Total Jan. .	76	30,334	31	15	46	131	177
Total Dec. .	96	8,479	48	23	57	174	231
Difference .	20	21,855	12	8	11	43	54

WELLS COMPLETED
KOHLER FIELD—DUVAL COUNTY

Kohler, Humble O. & R. Co. 38 25
Kohler, Humble O. & R. Co. 39 ..... gas
SCHOOLFIELD—O'BYRNE
Hahl, C. E. Long (Shell) 4 100
COLE POOL
Dinn, Allied Gas Co. (Shell) 3 ..... gas
Dinn, J. G. Mackay 3 ..... gas
King-Benavides, Magnolia Pet. Co. 2 ... gas
HENNE-WINCH-FARISS
F. G. Martinez, Magnolia Pet. Co. 4 .... gas
WILDCATS—ZAPATA COUNTY
F. G. Martinez, Magnolia Pet. Co. 3 .... gas
Roy Jennings, South Texas Prod. Co. 2 abd
Garza, R. F. Blankenship 1 ..... abd
J. G. Martinez, O. W. Killam 1 ..... gas
JENNINGS POOL
F. Cuellar, Harry L. Fansler 1 ..... gas
Joe Jennings, South Texas Prod. Co. 8 .. abd
Cuellar, O. W. Killam 18 ..... abd
F. G. Martinez, Allied Gas Co. 1 ..... gas
CHARCO—REDONDO
Martinez, W. R. Duke (Duke & Evangeline 2 "B" ..... abd
MAGNOLIA-COLE—WEBB COUNTY
F. Benavides, Magnolia Pet. Co. 1 ..... gas
C. Benavides, Magnolia Pet. Co. 2 150
D. Benavides, Magnolia Pet. Co. 1 ..... gas
C. Benavides, Magnolia Pet. Co. 3 ..... abd
Bruni, O. W. Killam 16 ..... gas
COLE POOL
Benavides, Houston Oil Co. D-20 75
Bruni, E. H. Buckner 1 ..... gas
AVIATOR POOL
Puig, C. E. Mayberry 9 ..... abd
ALWORTH POOL—JIM HOGG COUNTY
M. Garza, Charles B. Stevens 2 ..... abd

Wells completed 25
Production 350
Dry 8
Gas 13
Gas production 370,000,000

DARST CREEK—GUADALUPE COUNTY

Dowdy, Empire G. & F. Co. 1 700
Baker, Humble O. & R. Co. 3 350
Denman, Humble O. & R. Co. 1 1800
Klien, Magnolia Pet. Co. 1 600
Dowdy, Turman Oil Co. 1 1500
Posey, The Texas Co. 1 1584
L. G. Denman, Humble O. & R. Co. 2 .. 1800
Baker, Magnolia Pet. Co. 1 ..... abd
Rand Miller, Penn Oil Co. 1 500
Yates, Wilson, Humble O. & R. Co. 2 .. 1500
Sally Wilson, Humble O. & R. Co. 2 720
Sally Wilson, Humble O. & R. Co. 3 1500
Tadlock, Gulf Prod. Co. 1 288
Thos. Dix, Gulf Prod. Co. 1 750
C. Anderson, Gulf Prod. Co. 1 3000
Dix, Magnolia Pet. Co. 3 700
Dallas Wilson, The Texas Co. 2 ..... abd
Dix-McKean, Gulf Prod. Co. 1 720
Dix, Abercrombie et al 1 2000
Rand Miller, Stroubie & Stroubie 1 450
P. Roamel, The Texas Co. 1 1224
P. Roamel, The Texas Co. 2 1500
Rand Miller, Turman Oil Co. 2 300
Dix-McKean, United North & South Dev. Co. 1 2400
Thos. Dix, United North & South Dev. Co. 2 1208
J. M. Richburg, Magnolia Pet. Co. 1 ... 350
Denman, Humble O. & R. Co. 3-A 1440
C. Zedler, Magnolia Pet. Co. 2 ..... abd
P. Roamel, United North & South Dev. Co. 2 ..... abd

Wells completed 29
Production 29,334
Dry 4

BUCHANAN POOL—CALDWELL COUNTY

Medlin, Al Buchanan 1 600
WHITE POINT—SAN PATRICIO COUNTY
The Texas Co. fee, Spencer & Rhodes 2. gas
KINGSVILLE POOL—KLEBERG COUNTY
R. J. Kleberg, Humble O. & R. Co. 8 .. gas
MISCELLANEOUS
Wildcats—Bee County—
Tipps, The Texas Co. 2 ..... abd
Wildcats—Bexar County—
Clarence V. Uhl, Ross E. Fenton 1 ..... abd
Francis Duinig, W. H. Wallace et al 1. abd
Wildcats—Goliad County—
M. C. Spangle, Humble O. & R. Co. A-2 abd
Lucas, Union Producing Co. 1 ..... abd
Wildcats—Guadalupe County—
Zoberoski, Adams-Lyles-Walton 1 .... abd
Wells, Grayburg Oil Co. 1 ..... abd
Denman, Shell Pet. Co. 1 ..... abd
E. Menking, Cullen & West 1 ..... abd
Wildcats—Kerr County—
Real, L. R. Page and associates 1 ..... abd
Wildcats—Maverick County—
Bandera School Land, The Texas Co. 1. abd
Wildcats—Dimmit County—
Laxon, Texas Fuel Gas Co. 1 ..... abd
Wildcats—Gonzales County—
J. E. Preston, United North & South Dev. Co. 1 ..... abd
Wildcats—Zavala County—
West, Texas Fuel Gas Co. 3 ..... abd
Fee, Chicago Merchants Produce Co. 1 abd
Wildcats—Uvalde County—
Edmonds, Waldrop & Welch 1 ..... abd
Wildcats—Wilson County—
Felix Kulesza, Tidal Oil Co. 1 ..... abd
Wildcats—Medina—
V. Mangold, T. N. T. Drlg. Co. 1 ..... abd
Wildcats—Caldwell County—
Robert Guinn, Stone et al 2 ..... abd

Wells completed 19
Abandoned 19

ALABAMA

	Rigs	Drg.	Ttl.
Lamar	0	1	1
Lauderdale	1	0	1
Marion	1	0	1
Sumpter	0	1	1
Washington	0	2	2
Total Feb.	2	4	6
Total Jan.	1	4	5
Difference	1	0	1

MISSISSIPPI

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Alcorn	0	0	0	0	0	1	1
Chickasaw .	0	0	0	0	0	1	1
Harrison ..	1	0	1	0	0	0	0
Hinds	1	0	1	0	0	3	3
Humphreys.	0	0	0	0	0	1	1
Lafayette .	0	0	0	0	0	1	1
Lauderdale.	0	0	0	0	1	2	3
Lincoln ...	0	0	0	0	0	1	1
Monroe ...	0	0	0	0	0	3	3
Rankin	1	0	1	0	0	0	0
Warren	0	0	0	0	0	1	1
Yalobusha .	1	0	1	0	0	1	1
Yazoo	0	0	0	0	0	1	1
Total Feb.	4	0	4	0	1	16	17
Total Jan.	0	0	0	0	6	14	20
Difference	4	0	4	0	5	2	3

MISSOURI

WELLS COMPLETED
ST. LOUIS COUNTY

St. Louis—Fee, Hoffman Brothers Construction 1 ..... dry

NORTH LOUISIANA

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Avoyelles ..	0	0	0	0	1	0	1
Bossier	6	130	3	1	15	16	31
Caddo	13	235	2	2	3	16	19
Claiborne ..	0	0	0	0	1	3	4
Concordia .	0	0	0	0	0	1	1
DeSoto	1	0	1	0	1	4	5
Franklin ..	0	0	0	0	1	2	3
LaSalle ...	4	0	0	0	0	3	3
Morehouse .	3	0	1	2	5	7	12
Natchitoches	0	0	0	0	0	3	3
Ouachita ..	7	0	1	6	9	11	20
Rapides ...	0	0	0	0	0	1	1
Red River .	2	17	1	0	1	2	3
Richland ..	9	0	2	7	10	18	28
Sabine	3	135	0	0	6	18	24
Union	3	0	0	3	1	2	3
Tensas	0	0	0	0	1	0	1
Webster	4	0	2	2	4	11	15
West Carroll	0	0	0	0	1	1	2
Total Feb.	55	517	13	23	60	119	179
Total Jan.	64	1,147	21	31	58	115	173
Difference	9	630	8	8	2	4	6

*Gas production: Bossier 6,343,000; Caddo 8,500,000; Morehouse 76,443,000; Ouachita 26,568,000; Richland 103,388,000; Union 13,979,000; Webster 31,646,000. Total 266,867,000.

WELLS COMPLETED
BOSSIER PARISH

18-17-11 Murff, Corbett and others 1 .. dry
12-17-12 Thigpen & Herold, La. Gas. & Fuel Co. 1 ..... gas
26-23-12 Roberson, Magnolia Pet. Co. 1 (OWDD did not drill) .... abd
20-19-13 Leonard, G. G. Nesbit et al 1. dry
14-19-14 Byrd, Old River Oil Corp. 1. 30
31-23-11 Hl. Rose Merch. Co., The Texas Company 3 100

Wells completed 6
Production 130
Gas 1
Dry 3
Gas production 6,343,000

CADDO PARISH

22-22-15 Jolly, Bayou State Oil Corp. 28 10
23-22-15 Levee Board, Bayou State 18. 10
15-21-15 Herndon, H. J. Bussa 7 10
7-16-16 Agurs, Calatex O. & G. Co. 1-A gas
15-21-15 Spell, Double II Oil Co. 13 .. 10
8-17-16 Abney, Eastern Carbon Co. 1 gas
34-21-16 Levee Board, Gulf Ref. Co. 22-A 60
18-19-14 Oden, Gulf Ref. Co. 6 ..... dry
6-20-15 Doan-Thigpen, Magnolia Pet. Co. 19 5
15-21-15 Dreyfuss-Lane, E. W. McGoldrick 3 5
29-22-15 Caldwell, Oilfields Exploration Co. 15 25
32-21-15 Hicks and others, Shreveport Oil Corp. 3 100
9-19-14 Sentell, The Texas Company 3 dry

Wells completed 13
Production 235
Dry 2
Gas 2
Gas production 8,500,000

DE SOTO PARISH

4-10-13 Hill, Benson Oil & Gas Co. 1 dry
LA SALLE PARISH
1-10-1e Urania, Philp and others 1 .. dry
1-10-1e Urania, Randall and others 3 dry
19-10-2e Urania, Trio Oil Co. (drk) ... abd
17- 7-2e L.&A.R.R., Tunica Pet. Co. 52 dry
MOREHOUSE PARISH
33-21-5 U. S. Govt., Magnolia Pet. Co. 6 ..... gas
33-21-5 U. S. Govt., Magnolia Pet. Co. 7 ..... gas
4-20-4 Tensas, Southern Carbon Co. 13 (rig) ..... abd

Gas production 76,443,000

OUACHITA PARISH

47-18-4 Johnson, Chauvin Gas Co. 3 .. gas
42-18-4 Osterland, Michlouzanner O. & G Co. 1 ..... gas
7-18-5 Cagle, Palmer Corp. 1 ..... gas
6-18-4 West Va. L. & T. Co., Sho-Van Gas Products Co. 5 ..... gas
43-20-4 Fairbanks, Southern Carbon Co. 14 ..... gas
8-19-4 Phillips, Southern Carbon Co. 4 ..... gas
35-19-3 Spade, United Carbon Co. 5 (drk) ..... abd

Wells completed 7
Gas 6
Gas production 26,568,000

SABINE PARISH

33-10-12 Horne, Ark. Fuel Oil Co. 3 40
33-10-12 E. E. Hall, Magnolia Pet. Co. 5 60
32-10-12 Moore, Reid Clarke and others 2 35

Wells completed 3
Production 135

UNION PARISH

10-20-3 School, Bahan & Bahan 3 .... gas
11-20-3 A. B. Edwards, Lyons Gas Co. 1 gas
12-20-3 Reid, United Carbon Co. 2 .... gas

Gas production 13,979,000

RICHLAND PARISH

1-16-6 Boughton, Industrial Gas Co. 1 ..... gas
6-16-7 Jack Davidson, Industrial Gas Co. 1-A ..... gas
35-16-5 C. M. Noble, Magnolia Pet. Co. (loc.) ..... abd
20-17-6 Boykin, Northern La. Nat. Gas Co. 5 ..... gas
13-16-6 Thompson, Richland Producing Co. 1 ..... gas
26-17-6 Eubanks, Palmer Corp. 1 .... gas
34-17-6 Rhymes, Palmer Corp. 5 ..... gas
26-16-6 S. R. Humble, Southern Carbon Co. 1 ..... dry

Wells completed 9
Gas 7
Gas production 103,388,000

RED RIVER PARISH

8-13-10 Home Savings & State Bank, Root Refineries, Inc. 1 .... dry
33-13-11 W. M. Pollock, Triple Oil Co. 1 17
WEBSTER PARISH
29-23-9 C. O. Bailey, Magnolia Pet. Co. 1 ..... dry
22-21-10 McCook & Hibler, Magnolia Pet. Co. 1 ..... dry
28-21-10 Bodcaw, Standard Oil Co. 1-E gas
22-21-10 Thos. Crichton and others, Standard Oil Co. 1 ..... gas

Gas production 31,646,000

ARKANSAS

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	Ttl.
Ashley	0	0	0	0	0	1	1
Clark	1	0	1	0	0	0	0
Cleburne ...	0	0	0	0	0	2	2
Columbia ..	0	0	0	0	1	1	2
Drew	0	0	0	0	0	1	1
Faulkner ..	0	0	0	0	1	0	1
Garland ...	0	0	0	0	0	1	1
Grant	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	1	1
Little River	0	0	0	0	0	2	2
Logan	0	0	0	0	1	0	1
Madison	0	0	0	0	0	1	1
Nevada	0	0	0	0	1	1	2
Ouachita ..	5	126	0	0	2	8	10
Pike	0	0	0	0	0	1	1
Pope	0	0	0	0	0	2	2
Prairie	0	0	0	0	0	1	1
St. Francis.	0	0	0	0	0	1	1
Union	6	585	4	0	4	15	19
Van Buren.	0	0	0	0	0	1	1
Washington	0	0	0	0	0	4	4
White	0	0	0	0	0	1	1
Total Feb.	12	711	5	0	10	46	56
Total Jan.	16	265	7	0	8	53	61
Difference	4	446	2	0	2	7	5

WELLS COMPLETED
CLARK COUNTY

34-9-21 Clark, Wm. Henry and others. dry
OUACHITA COUNTY
22-15-19 Green, La. Oil Ref. Corp. 1.... 26
4-16-15 Hays, Marine Oil Co. 7-A 25
34-15-15 E. Johnson, Simms Oil Co. 5.. 40
34-15-15 Powell, Standard Oil Co. 10 .. 10
27-15-15 Watts, Southern Producing Co. 2-A 25

Wells completed 5
Production 126

UNION COUNTY

18-18-17 Gallagher & Nelson, Sam Arrendale 1 ..... dry
5-17-14 Schmidt, Magnolia Pet. Co. 1.. dry
10-18-13 Thompson, Marine Oil Co. 3-A 465
14-18-14 Union Saw Mill, Joe Modisette and others 2 120
10-19-14 Union Saw Mill, Oil Well Corp. 1 ..... dry
4-17-15 Thompson, Wilson & Chapman 1 ..... dry

Wells completed 6
Production 585
Dry 4

KENTUCKY

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Warren	1	6	0	0	0	0	0
Allen	0	0	0	0	0	4	4
Ohio	28	630	7	3	3	21	24
Daviess	16	526	4	1	0	13	13
Hancock ...	2	50	0	0	0	2	2
McLean	0	0	0	0	0	3	3
Henderson ..	0	0	0	0	0	12	12
Webster	0	0	0	0	0	3	3
Muhlenberg..	2	0	1	1	0	10	10
Hopkins	1	0	1	0	0	8	8
Butler	0	0	0	0	1	1	2
Christian ...	0	0	0	0	2	3	5
Breckenridge	0	0	0	0	1	1	2
Union	0	0	0	0	0	1	1
Cumberland .	0	0	0	0	0	2	2
Logan	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Caldwell ...	0	0	0	0	0	1	1
Wayne	2	0	2	0	1	3	4
Powell	1	7	0	0	0	1	1
Estill	1	3	0	0	0	3	3
Morgan	0	0	0	0	0	1	1
Lee-Owsley .	0	0	0	0	0	2	2
Lawrence-Johnson ..	2	15	0	0	0	0	0
Johnson-Magoffin ..	4	8	0	0	0	4	4
Floyd	0	0	0	0	0	1	1
Clay	0	0	0	0	0	2	2
Jackson	0	0	0	0	0	1	1
Knox	1	0	0	1	0	2	2
Total Jan.	61	1,245	15	6	8	107	115
Total Dec.	81	3,008	18	9	7	172	179
Difference	20	1,763	3	3	1	65	64

WELLS COMPLETED
OHIO COUNTY

Hartford—J. W. Dawson, Smith & Co. 3 dry

J. W. Dawson, Smith & Co. 4..... 10
L. T. Bartlett, Rex-Pyramid Oil 4... dry
C. W. Morgan, Rex-Pyramid Oil 11... 30
Sallie Hoover, Rex-Pyramid Oil 13... 50
S. C. Rhodes, Rex-Pyramid Oil 3.... 80
Clyde Bartlett, Hupp & Duff 22..... dry
R. C. Whittaker, Hupp & Duff 2.... 10
P. R. Kelley, Ky. Pipe Line 4..... dry
T. P. Royal 40, H. L. Ogle & Co. 12.. 75
T. P. Royal 25, Natl. Deposit Bank 5 25
J. H. Evans, Jas. C. Ellis & Co. 2.... dry
Otis Greer 76, Jas. C. Ellis & Co. 10.. 40
Otis Greer 76, Jas. C. Ellis & Co. 11.. gas
S. M. Greer 134, Jas. C. Ellis & Co. 2. gas
Royal Hrs. 100, Jas. C. Ellis & Co. 4.. 15
R. A. Miller, Louisville G. & E. 3.... 75
E. M. Royal, Louisville G. & E. 1.... 10
A. P. Kelley, S. R. Nigh & Co. 14.... 10
Jake Smith, S. R. Berry & Co. 1.... 15
W. Midkiff, S. H. Russell & Co. 5.... 100
Tom Westerfield, Leeper Oil 5..... 40
Obie Helm, Leeper Oil 5..... 20
Murray Roberts, Frank Cox 1..... dry
Will Hartford, Swarthout & Co. 1.... gas
W. G. Kirk, Geo. Randolph & Co. 1.. 5
W. S. Neel, Mecca Oil 4..... dry
Jack King, Chester Oil 2..... 20

Wells completed 28
Production 630
Dry 7
Gas 3

WARREN COUNTY

Bowling Green—Ashur Smith, W. W. Wareham 1 6

DAVIESS COUNTY

Owensboro—Southwestern Title & Trust, Hupp & Duff 1..... dry
J. W. Ambrose, Cumberland Pet. 3... dry
Geo. Beard, Cumberland Pet. 1..... 20
Lindsay Taylor, Donning Drlg. 2.... 75
B. Johnson, Ohio Oil Co. 1..... 100
S. W. Title & Trust, Miller & Damron 1 6
Davis Hrs., Evans & Garrison 9..... 150
J. C. Malone, Evans & Garrison 1.... 30
J. M. Clark, Pet. Explin. 2..... 100
W. A. Murray, Eastern Gulf Oil 11... 2
B. Mackey, Johnson Young & Co. 3.. 25
Rex O'Flynn, Creek Drlg. ..... gas
Lewis, Jetsan Oil 1..... dry
B. Mackey, Johnson, Young & Co. 2. 8
Frank Fuqua, Farmers & Traders Bank 6 10
Nancy Miller, H. C. Smith 1..... dry

Wells completed 16
Production 526
Dry 4
Gas 1

HANCOCK COUNTY

Pellville—Link Richards, Jas. Thomas & Co. 1 40
L. Rosenblatt, S. T. McGill 3..... 10

Wells completed 2
Production 50

MUHLENBERG COUNTY

Greenville—W. E. Drake estate, Benedum-Trees 1 ..... gas
Rice Bros.-Woodson, Ellis, Young & Rowe 3 ..... dry

Wells completed 2
Dry 1
Gas 1

HOPKINS COUNTY

Madisonville—G. Wyatt, Ohio Oil 1.... dry

WAYNE COUNTY

Dist. 13—Lon Dishman, John Taller 1. dry
Hicks Hrs., Vogler & Work 1..... dry

Wells completed 2
Dry 2

POWELL COUNTY

Dist. 15—I. T. Rogers, Holden & Malone 4 7

ESTILL COUNTY

Dist. 7—Geo. Reed Hrs., McEldowney, Bowser & Co. 7..... 3

LAWRENCE-JOHNSON COUNTIES

Dist. 32—R. M. Sparks, Boston-S. W. O. & G. 23 5
Jesse Lyons, Swiss Oil Corp. 35..... 10

Wells completed 2
Production 15

JOHNSON-MAGOFFIN COUNTIES

Dist. 27—Williams Hrs., Magoffin Oil 4 2
Dist. 29—Hernando Grace, Hudson & Collins 9 3
Dist. 30—Joe Howard, Oliver Jenkins 2 2
C. H. Williams, George & Youma 6.. 1

Wells completed 4
Production 8

KNOX COUNTY

Lykins Branch—Wade Cassidy, United Carbon Co. 1 ..... gas

ROCKY MOUNTAIN AREA

MONTANA

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Cat Creek ...	0	0	0	0	0	1	1
Kevin-Sunburst	1	5	0	0	10	6	16
Pondera	2	189	0	0	2	1	3
Miscellaneous.	4	0	3	1	6	70	76
Total Jan. .	7	194	3	1	18	78	96
Total Dec. .	31	690	14	7	20	86	106
Difference .	24	496	11	6	2	8	10

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Boulder	0	0	0	0	0	5	5
Fremont	5	150	4	0	3	13	16
Jackson	0	0	0	0	0	5	5
Larimer	1	15	0	0	3	6	9
Las Animas .	0	0	0	0	2	4	6
Mesa	0	0	0	0	0	2	2
Moffat	0	0	0	0	9	7	16
Pueblo	0	0	0	0	1	2	3
Rio Blanco ..	0	0	0	0	0	2	2
Routt	0	0	0	0	2	0	2
Yuma	0	0	0	0	0	2	2
Miscellaneous.	0	0	0	0	1	29	30
Total Jan. .	6	165	4	0	21	77	98
Total Dec. .	8	132	6	0	22	77	99
Difference .	2	33	2	0	1	0	1

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Total Jan. ...	0	0	0	0	4	30	34
Total Dec. ...	2	0	2	0	2	29	31
Difference .	2	0	2	0	2	1	3

WYOMING

Summary of Field Operations

District or County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Salt Creek ...	1	258	0	0	2	3	5
Big Horn ...	0	0	0	0	0	8	8
Carbon	1	0	1	0	0	15	15
Fremont	3	260	0	1	0	7	7
Hot Springs ..	1	193	0	0	0	4	4
Johnson	1	0	1	0	0	3	3
Lincoln	0	0	0	0	1	6	7
Natrona (exclu. Salt Creek).	2	40	0	0	1	6	7
Park	0	0	0	0	7	23	30
Sweetwater ..	0	0	0	0	2	13	15
Uinta	0	0	0	0	3	13	16
Sublet	2	190	0	0	2	18	20
Miscellaneous.	0	0	0	0	3	11	14
Total Jan. .	11	941	2	1	21	130	151
Total Dec. .	8	723	3	0	23	131	154
Difference .	3	218	1	1	2	1	3

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Chaves	0	0	0	0	0	2	2
De Baca	1	0	1	0	0	2	2
Eddy	3	0	3	0	6	8	14
Lea	9	6,045	1	0	11	26	37
McKinley	0	0	0	0	2	8	10
Rio Arriba ..	0	0	0	0	1	4	5
San Juan	0	0	0	0	4	11	15
Torrance	0	0	0	0	1	2	3
Miscellaneous.	0	0	0	0	5	12	17
Total Jan. .	13	6,045	5	0	30	75	105
Total Dec. .	8	0	7	1	28	82	110
Difference .	5	6,045	2	1	2	7	5

NEW MEXICO

WELLS COMPLETED

6-3s-22 McWhorter, Transcontinental Oil Co. 1 ..... dry
23-26-30 McAllister, Lockhart Oil Co. 1 dry
10-17-30 Parke, Lockhart et al 1 ..... dry
5-17-28 Vandegriff, Pecos Valley Gas 5 ..... abd
1-21-33 State, Amerada Pet. Corp. 1 .. dry
2-21-33 State, Cranfill & Reynolds 2-B 250
2-21-33 State, Cranfill & Reynolds 3-B 1200
9-19-38 State, Ohio Oil Co. 1 30
14-25-36 Lindley, Empire Gas & Fuel 1 2,000
13-25-36 Lindley, Humble O. & R. 2-A. 174
1-21-33 State, Continental Oil Co. 1 .. 405
10-19-38 State, Midwest Ref. Co. 24 ... 686
17-21-36 A. E. Meyers, Continental Oil 1 1300

Wells completed 13
Production 6045
Dry and abandoned 5

WYOMING

WELLS COMPLETED

3-19- 78 H. & C., Ohio Oil Co. 8 ..... dry
4-31- 98 Dallas Dome-Wyo. Oil 150
13-32- 99 Dallas Dome-Wyo. Oil 57 .. 110
15-32- 95 Producers & Refiners 9 ..... gas
14-44- 98 Empire State Oil Co. 1-A ... 193
4-43- 82 C. L. Sackett et al 2 ..... dry
26-40- 79 SW, Midwest Oil Co. 6-SD-3.. 258
36-37- 82 Weisman, All-States Oil Co. 3 15
1-36- 82 Weisman, All-States Oil Co. 1 25
3-26-113 Sackrider-Kuhlman 2 90
3-26-113 Sackrider-Kuhlman 3 100

Wells completed 11
Production 941
Gas 70,000,000
Dry and abandoned 2

COLORADO

WELLS COMPLETED

5-20-69 Griffith, M. L. Eno et al 1 .. dry
17-19-69 Potts, Boulder Oil Co. 1 ..... dry
16-19-70 Canon-Reliance Fuel Co. 1 ... dry
1-19-70 Givioannini, Continental Oil Co. 1 ..... dry
28-20-69 Travis, Vogral-Raddits Corp. 22 150
6- 9-68 Scott, Continental Oil Co. 4 .. 15

Wells completed 6
Production 165
Dry and abandoned 4

GULF COAST FIELDS

SOUTHEAST TEXAS

Field—	Comp.	Prod.	Abd.	Gas	Rgs.	Dlg.	Ttl.
Barbers Hill	9	14,052	1	0	3	17	20
Batson	4	36	0	0	1	1	2
Big Creek .	0	0	0	0	0	3	3
Blue Ridge .	2	35	1	0	0	0	0
Boling	1	0	1	0	0	1	1
Clay Creek .	2	0	2	0	0	2	2
Dam'n M'u'd	1	0	1	0	0	1	1
DeWalt ...	2	1,560	0	0	1	3	4
Goose Cr'ek	5	200	4	0	1	1	2
High Island	1	2,800	0	0	0	3	3
Hull	5	3,810	1	0	1	6	7
Humble ...	10	14,076	0	0	1	8	9
Liberty	2	30	1	0	1	3	4
Lost Lake..	1	0	1	0	0	3	3
Nash	0	0	0	0	0	1	1
No'th D'y'on	0	0	0	0	2	3	5
Orange	1	10	0	0	0	1	1
Orchard ...	0	0	0	0	0	1	1
Pierce Junction .	7	4,190	1	0	1	4	5
Rac'o'n B'nd	3	767	0	0	3	10	13
Refugio ...	16	4,364	3	4	10	33	43
Saratoga ...	3	58	1	0	1	1	2
Sour Lake..	5	155	3	0	0	1	1
Spindletop .	10	3,705	2	2	2	8	10
West C'l'bia	2	0	2	0	1	1	2
Miscella'eous	9	1,096	7	0	6	31	37
Total Jan.101		50,944	32	6	35	147	182
Total Dec.114		56,057	35	8	28	160	188
Difference 13		5,113	3	2	7	13	6

SOUTH LOUISIANA

Anse La B'te	0	0	0	0	0	1	1
Bayou Bol'n	1	0	1	0	0	2	2
Edgerly ...	1	0	1	0	1	2	3
Hackberry .	5	0	5	0	1	0	1
Jennings ..	1	0	1	0	0	4	4
Lockport ..	0	0	0	0	0	2	2
Sorento ...	0	0	0	0	0	1	1
Starks	2	425	0	0	0	1	1
Sulphur ...	1	3,100	0	0	0	3	3
Sweet Lake.	0	0	0	0	0	2	2
Vinton	1	20	0	0	0	3	3
Welsh	1	15	0	0	0	0	0
Miscella'eous	11	3,554	6	0	7	23	30
Total Jan.	24	7,114	14	0	9	44	53
Total Dec.	23	6,045	15	1	11	44	55
Difference	1	1,069	1	1	2	0	2
Total Gulf Coast ...	125	57,958	46	4	44	191	235
Total Dec.	137	62,102	50	9	39	204	243
Difference .	12	4,144	4	5	5	13	8

WELLS COMPLETED

BARBERS HILL—CHAMBERS COUNTY

Hammond, Mills Bennett Prod. Co. 3 .. 50
Wilburn, Mills Bennett Prod. Co. 2 2000
Collier, Mills Bennett Prod. Co. 2 912
Kirby, Humphreys Corp. 8-A 8100
McLean, Rexal Oil Co. 3 50
McKinney, Sinclair Oil & Gas Co. 1.... abd
Wilburn, Sinclair Oil & Gas Co. 2 1000
Wilburn, Sun Oil Co. 2 1400
Chambers, Yount Lee Oil Co. 10 540

Wells completed 9
Production 14,052
Abandoned 1
Gas 0

BATSON—HARDIN COUNTY

Carlton, Ada Belle Oil Co. 130 3
Hooks & Choate, Ada Belle Oil Co. 131 20
Hooks & Choate, Ada Belle Oil Co. 132 10
Paraffine, Paraffine Oil Co. 84 3

Wells completed 4
Production 36

BLUE RIDGE—FORT BEND COUNTY

West-Schenck, Humphreys Corp. 4 35
Blakely, Cunningham Prod. Co. 6 .... abd

Wells completed 2
Production 35
Abandoned 1

BOLING—WHARTON COUNTY

Schendal, Texas Gulf Sulphur Co. 2 .. abd

CLAY CREEK—WASHINGTON COUNTY

Cockrell, Sun Oil Co. 2 ..... abd
Clay, Sun Oil Co. 2 ..... abd

Wells completed 2
Abandoned 2

DAMON MOUND—BRAZORIA COUNTY

Smith, H. R. Cullen 2 ..... abd

DE WALT—FORT BEND COUNTY

Sugarland, Humble Oil & Ref. Co. 2-B 560
Bankers Mortgage, Humble Oil & Ref. Co. 2-C 1000

Wells completed 2
Production 1560

GOOSE CREEK—HARRIS COUNTY

Gillette, A. J. Bradbury 5 ..... abd
Busch, Cedar Bayou Oil Co. 11 ..... abd
Gillette, Russell Ferrell 4 200
Duke, Lake Shore Oil Co. 3 ..... abd
Scorrega, J. M. West 3 ..... abd

Wells completed 5
Production 200
Abandoned 4

HIGH ISLAND—GALVESTON COUNTY

Cade, McLean Oil Co. 6 2800

HULL—LIBERTY COUNTY

Barngrover, Empire Gas & Fuel Co. 30 600
Phoenix, Gulf Prod. Co. 50 ..... abd
Phoenix, Gulf Prod. Co. 68 2800
Barngrover, Houston Prod. Co. 14 350
Dolbear, Republic Prod. Co. 122 60

Wells completed 5
Production 3810
Abandoned 1

HUMBLE—HARRIS COUNTY

Williams, Humble Oil & Ref. Co. 6 ...1600
Williams, Humble Oil & Ref. Co. 7 ... 150
Williams, Humble Oil & Ref. Co. 9 ...4000
Williams, Humble Oil & Ref. Co. 10 .. 800
Lee, South Texas Pet. Co. 2 2000
Morris, South Texas Pet. Co. 12 750
Morris, South Texas Pet. Co. 13 500
Bender, Sun Oil Co. 3 1800
Dunman, The Texas Company 3 1100
Dunman, The Texas Company 4 1376

Wells completed 10
Production 14,076

LOST LAKE—CHAMBERS COUNTY

Mayes, Pure Oil Co. 8..... abd

LIBERTY—LIBERTY COUNTY

Groggan, Empire G. & F. Co. 9..... abd
Groggan, Empire G. & F. Co. 10..... 30

Wells completed 2
Production 30
Abandoned 1

ORANGE—ORANGE COUNTY

Jackson, Supreme Oil Co. 3..... 10

PIERCE JUNCTION—HARRIS COUNTY

Taylor, Gulf Prod. Co. 31..... 900
Dooley, Navarro Oil Co. and Humble O. & R. Co. 5..... 50
Dooley, Navarro Oil Co. and Texas Exploration Co. 11.....1200
Herman, Saxet Oil Co. 6..... 600
Settegast, Smith & Plummer 1..... abd
Herman, Superior Oil Corp. 2.....1000
Whitehead, Superior Oil Corp. 3-B..... 350

Wells completed 7
Production 4190
Abandoned 1

RACCOON BEND—AUSTIN COUNTY

Payne, Humble O. & R. Co. and Valley Oil Corp. 4 317
Payne, Humble O. & R. Co. and Valley Oil Corp. 5 400
Mueller, Humble O. & R. Co. and Valley Oil Corp. 6 50

Wells completed 3
Production 767

REFUGIO—REFUGIO COUNTY

Rooke, Benedum & Trees 1..... abd
P-H-R, Houston Oil Co. 11..... gas
P-H-R, Houston Oil Co. 12..... 200
J. F. B. Heard, Independent O. & G. Co. 1-A ..... gas
J. F. B. Heard, Independent O. & G. Co. 2-B ..... gas
Reilly, Independent O. & G. Co. 4..... 150
O'Brien, Independent O. & G. Co. 1.... abd
Strauch, The Larco Co. 1..... 35
Fox, Morgan Oil Co. 1..... 900
Claud Heard, Pearson Properties 1.... 900
Fox, Pearson Properties 3..... abd
Blk. 92, Rutherford-Traylor Oil Co. 1.. 360
Ryals, Saxet Oil Co. 1..... 775
Holmes Heard, Saxet Oil Co. 3..... 50
Mitchell, Union Prod. Co. 2..... 504
Powers, Union Prod. Co. 2..... gas

Wells completed 16
Productoin 4364
Abandoned 3
Gas 4

SARATOGA—HARDIN COUNTY

Cotton, Rio Bravo Oil Co. 86..... 8
Cotton, Rio Bravo Oil Co. 86-A..... 50
Cotton, Rio Bravo Oil Co. 86-B..... abd

Wells completed 3
Production 58
Abandoned 1

SOUR LAKE—HARDIN COUNTY

Watson, John Austin et al 1..... abd
Minor, Lake View Oil Co. 3..... abd
Merchant, Orange Pet. Co. 3..... 35
Wirt Davis, H. M. Terry 1..... abd
Fee, The Texas Co. 287..... 120

Wells completed 5
Production 155
Abandoned 3

SPINDLETOP—JEFFERSON COUNTY

McFaddin, Yount Lee Oil Co. 55.....1200
McFaddin, Yount Lee Oil Co. 108..... 700
McFaddin, Yount Lee Oil Co. 121.....1300
McFaddin, Yount Lee Oil Co. 122..... gas
Gladys City, Yount Lee Oil Co. 18..... abd
Gladys City, Yount Lee Oil Co. 45..... 120
Gladys City, Yount Lee Oil Co. 61..... gas
Gladys City, Yount Lee Oil Co. 97..... 35
McFaddin, Yount Lee Oil Co. 71..... 350
Fee, Yount Lee Oil Co. 11..... abd

Wells completed 10
Production 3705
Abandoned 2
Gas 2

WEST COLUMBIA—BRAZORIA COUNTY

Hogg, Continental Oil Co. 1..... abd
Hogg, Saxet Oil Co. 2 ..... abd

Wells completed 2
Abandoned 2

MISCELLANEOUS TEXAS

Colorado County—
Nelson, Coyle & Concord 2 ..... abd
Chambers County—
Lawrence, Chicago Oil Corp. 1 ..... abd
Harris County—
Brodt, Hammond et al 1 ..... abd
Montgomery County—
Juerges, Kelley-Baker et al 1 ..... abd
Jefferson County—
Walker, Rosedale Oil Co. 1 ..... abd
Liberty County—
Sheeks—Esperson, Cranfill & Reynolds Oil Co. 5-A 312
Moss Bluff—Sterling, Humble Oil & Refining Co. 6 864
Washington County—
Kieke, Fuchs et al 1 ..... abd

Wells completed 8
Production 1176
Abandoned 6

SOUTH LOUISIANA

BAYOU BOUILLON—ST. MARTIN PARISH

Atchafalaya fee, Rycade Oil Corp. 2 .. abd

EDGERLY—CALCASIEU PARISH

Hunter, Rex Pet. Co. 10 ..... abd

HACKBERRY—CAMERON PARISH

Lempke, Calcasieu Oil Co. 6 ..... abd
Caldwell, Calcasieu Oil Co. 4 ..... abd
Watkins, Calcasieu Parish 16 ..... abd
Duhon, Rex Pet. Co. 1 ..... abd
Gulf Land, Rycade Oil Corp. and Humbls Oil & Ref. Co. 4 ..... abd

Wells completed 5
Abandoned 5

JENNINGS—ACADIA PARISH

Crowley, Yount Lee Oil Co. 5 ..... abd

STARKS—CALCASIEU PARISH

Lutcher-Moore, Gulf Refining Co. 18 .. 175
Lutcher-Moore, Gulf Refining Co. 19 .. 250

Wells completed 2
Production 425

SULPHUR—CALCASIEU PARISH

Fee, Union Sulphur Co. 752 3100

VINTON—CALCASIEU PARISH

Gray, Vinton Pet. Co. 7 20

WELSH—JEFFERSON DAVIS PARISH

Walshe, J. E. Carradine 5 15

MISCELLANEOUS LOUISIANA

Cameron Parish—
Starks, Yount Lee Oil Co. 1 ..... abd

Evangeline Parish—
Pine Prairie—Guillory, The Texas Company 1 ..... abd

Iberia Parish—
Jefferson Island—Lake Peigneur, Jeff. Lake Oil Co. 3 ..... abd

Iberville Parish—
Bayou Blue—Wilbert, Standard Oil Co. 4 450

St. Landry Parish—
Port Barre—Hoskins, Gulf Ref. Co. 1 .. 100
Port Barre—Botney Bay, The Texas Company 3 1900

St. Mary Parish—
Belle Isle—Premier, Freeport Sulphur Co. 6 ..... abd
Belle Isle—Premier, Freeport Sulphur Co. 7 ..... abd

Terrebonne Parish—
Caillou Island—State, The Texas Company 2 1104
Bay Junop—State, The Texas Company 1 ..... abd

Wells completed 11
Production 3554
Abandoned 6

EASTERN FIELDS

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Allegany	25	62	0	0
Bradford	124	262	0	0
Venango-Clarion	19	26	1	4
Middle Field	7	14	0	0
Butler-Armstrong	14	19	2	2
S. W. Pennsylvania	14	30	1	3
West Virginia	62	205	9	34
Southeast Ohio	64	1,195	5	10
Total Jan.	329	1,813	18	53
Total Dec.	401	2,100	30	90
Difference	72	287	12	43

Summary of Work Under Way

Field—	Rigs	Drlg.	Ttl.
Allegany	7	20	27
Bradford	60	100	160
Venango-Clarion	4	11	15
Middle Field	0	5	5
Butler-Armstrong	2	7	9
S. W. Pennsylvania	6	28	34
West Virginia	36	117	153
Southeast Ohio	28	82	110
Total Jan.	143	370	513
Total Dec.	138	421	559
Difference	5	51	46

ALLEGANY FIELD
Summary of Work Completed

V. B. Stewart est., Sepany Oil Co. 10
E. Fries, N. V. V. Franchot, mgr. tr... 4
Van Campen, J. H. Brahaney 1
Miller & Bovaird, J. W. Bucher est. .. 3
Lippert, C. M. Lippert et al 2
Fee, Mary Lippert 2
Fee, Ryder & Richmond Oil Corp. 2
Fee, Ryder & Richmond Oil Corp. 2
Fee, Ryder & Richmond Oil Corp. 2
Fee, Ryder & Richmond Oil Corp. 2
Fee, Herbert Spring 1
Fee, Andrews Oil Co. 5
First Natl. Bank Shinglehouse, Currie & Burns 1
Fee, Bayard C. Tullar 2
Fee, A. H. Ashworth 1
McDermott, Willbart Oil Co. 3
Birtcil, First Natl. Bank Olean 2
Reeland et al, South Penn Oil 2
Gray, Smith and Gray 2
Fee, Gilligan & Dermitt 5
Fee, Gilligan & Dermitt 5
Fee, A. C. A. Oil Corp. 1
Fee, William Bartoo et al 2

Wells completed 25
Production 62
Dry 0
Gas 0
Pressure 2

BRADFORD FIELD

Duke & Taggart, V. Schofferle 1
Duke & Taggart, V. Schofferle 1
Duke & Taggart, R. Jeutter et al 1
Duke, Penn Petroleum Co. 2
Borden, A. Williams 3
Middaugh, A. L. and L. M. Lilly 3
Fee, A. L. and L. M. Lilly 3
Bingham, South Penn Oil Co. 2
Duke, M. L. Boyle et al 1
Rounds, N. V. V. Franchot, mgr. tr... 16
Fee, Hesser Oil Corp. 1
Weston, G. C. Rice et al 1
Fee, Mix Creek Oil Co. 1
Fee, Mix Creek Oil Co. 1
Hoffman, Bell & Loop 1
Fee, D. J. Moody 3
Russell, C. E. Potter 3
Keating, First Natl. Bank of Olean .. 4
Mantz, L. F. Kinley et al 58 1
Bing. 419, Daly Oil Co. 12 2
Bing. 369, D. W. Daly 2 2
Bing. 464, R. S. Pringle 36 2
Lawton, Niagara Oil Corp. ..... oil
Riddell est., South Penn Oil 4
Fee, South Penn Oil 1
Weston, Bradford Producing Co. ..... oil
Weston, Bradford Producing Co. ..... oil
Weston, Bradford Producing Co. ..... oil
Redfield, South Penn Oil 2
Fee, M. C. Reidy 3
Sikes, Letson & Smith 2
Fee, R. O. Landers et al 2
Fee, Hazlewood Oil Co. 1
Fee, Hazlewood Oil Co. 1
Fee, South Penn Oil Co. 2
Fee, J. A. Walters estate 5
Fee, Healey Petroleum Corp. 2
Fee, Healey Pétroleum Corp. 3
Taylor, South Penn Oil Co. 7
Fee, T. H. Kennedy 3
Fee, W. F. Hunt 3
Bingham 468, Brink & Brink 10
Fee, Stover & Schorman 10
Bingham 321, D. T. Andrus et al 8
Fee, South Penn Oil 1
Bingham, Hazlewood Oil Co. 2
Bingham 150, South Penn Oil 2
Bingham 150, South Penn Oil 2
Bingham 150, South Penn Oil 2
Bingham 475, South Penn Oil 2
Northwestern Mining, South Penn Oil.. 5
Fee, South Penn Oil 2
Bingham 494, South Penn Oil 1
Bingham 539, South Penn Oil 2
Bingham 439, South Penn Oil 2
Fee, South Penn Oil 5
Fee, South Penn Oil 8
Haines, Luke Bros. 1
Bingham 186, Hazlewood Oil Co. 1
Fee, Hazlewood Oil Co. 1
Hazlewood Tract 1, Hazlewood Oil Co.. 1
Fee, South Penn Oil 3
Whipple, South Penn Oil 1
Bingham 390, South Penn Oil 3
Bingham 395, South Penn Oil 2
Bingham 398, South Penn Oil 2
Bingham 499, South Penn Oil 3
Bingham 554, South Penn Oil 5
Fee, Minard Run Oil Co. 5
Bingham 593, P. A. Oakes & Sons 5
M. E. Jones, South Penn Oil 4
Hifler, Bradford Producing Co. 1
Daniels, Bradford Producing Co. 2
Barry, T. H. Kervin, Jr. ..... oil
Gilpin, T. P. Johnson, Jr. ..... oil
Quintuple, Healey Petroleum Corp. ... oil
Fee, Healey Petroleum Corp. ..... oil
Tibbits, Minard Run Oil Co. ..... oil
Newell, E. E. Bryner & Son ..... oil
Quintuple, W. C. Kennedy Co. ..... oil
Stoddard, Minard Run Oil Co. ..... oly
Bingham, Walker Bros. 4
Fee, Fred Lawson 1
Bingham, Gibson Oil Co. 2
Fee, Devore Oil Co. 3
Fee, Robert Roy 3
Bingham, Minard Run Oil Co. 20
Bryner & Son, Minard Run Oil Co. 10
Deiter, Deiter Bros. 3
Quintuple Oil Co., W. C. Kennedy & Co. oil
Fee, D. M. Edmonds heirs ..... oil
Ross, Hilliard & Onifro ..... oil
Quintuple Oil Co., W. M. Howard .... oil
Hamlin, Minard Run Oil Co. 8
Lamprey, Robert Russell 6
Fee, Blaisdell Oil Co. 2

Wells completed 124
Production 262
Air and pressure 28

CLARION-VENANGO

Weaver, H. M. Hess 1 ..... dry
Exchange Bank & Trust, W. S. Bowman 5
Tract 74, S. Y. Ramage 96 1
P. C. L. & P. Co., Jenkins & Grimm 46 1
Mathews, Plum Oil Gas Co. 1
Varmer, Franklin Trust Co. 9 ..... gas
McBride, Lamberton Natl. Bank 27 ... 1
Melford, South Penn Oil Co. 35 1
Helscel, C. F. & C. Oil & Gas Co. 1
Meherten et al, F. C. Deemer 17 2
Meherton et al, F. C. Deemer 18 1
Meherton, F. C. Deemer 19 5
Columbia, Pioneer Oil Co. 1
Brevort, J. B. and J. D. Berry ..... air
McLaughlin, Thomas McLaughlin 22 .. gas
Bush, Fryburg Motor Co. 7 ..... gas
Sporer, United Natural Gas Co. 3,902 .. gas
Slicker, H. J. Slicker & Sons 15 2
Russell, South Penn Oil Co. 2 4

Wells completed 19
Production 26
Dry 1
Gas 4
Pressure 1

MIDDLE FIELD

Bailey, H. Anderson 1
Smith, Perry & Co. 1
Lot 107, J. M. Sharp 17 1
Lot 202, P. C. Jordan 2 5
Jennings, Titusville Trust Co. 40 3
Grandon, S. Y. Ramage 21 2
Aspy, Hague & Co. 3 1

Wells completed 7
Production 14

BUTLER-ARMSTRONG

Blair & Stewart, Blair & Stewart 12 .. 1
B. H. Morgan, Morgan, Purvis et al 12 4
Seigle, H. J. Crawford 11 1
Lefever, Floyd Albert et al ..... dry
McCullough, McCullough Gas Co. 3 .... gas
Pontius, Storey, West et al 1 2
J. Vogt, J. Vogt 1
McKinney, William McKinney 10 1
Jack, T. C. Barnes 7 1
Voeghtly Bros., W. J. Thompson et al 1 3
Binkham, J. A. Elliott & Dufford 3 ... 3
Peffer, E. Z. Peffer 5 2
Shanor, M. B. Finnessy 19 ..... gas
McGinnis, L. T. McGinnis 14 ..... dry

Wells completed 14
Production 19
Dry 2
Gas 2

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Ashland	2	0	0	2	6	17	23
Medina	4	5	1	2	5	2	7
Lorain	3	0	0	3	2	4	6
Wayne	4	0	1	3	2	7	9
Holmes	1	0	0	1	4	8	12
Ashtabula	1	0	0	1	0	4	4
Richland	0	0	0	0	1	4	5
Knox	6	36	3	2	3	8	11
Coshocton	2	98	0	0	4	3	7
Summitt	7	0	2	5	3	17	20
Licking	8	222	0	1	6	11	17
Muskingum	13	243	4	4	8	25	33
Athens	11	4	5	3	9	13	22
Meigs	9	17	2	4	3	11	14
Jackson	3	0	1	2	4	6	10
Vinton	2	4	1	0	6	3	9
Lawrence	1	0	0	1	3	0	3
Tuscarawas	2	0	0	2	1	4	5
Stark	1	0	1	0	1	10	11
Lake	0	0	0	0	0	1	1
Fairfield	0	0	0	0	1	3	4
Morrow	0	0	0	0	0	1	1
Guernsey	7	248	1	0	2	8	10
Belmont	2	0	0	2	1	4	5
Pike	2	0	1	1	0	0	0
Gallia	1	0	1	0	0	1	1
Harrison	2	2	1	0	0	0	0
Total Jan.	94	879	25	39	75	175	250
Total Dec.	115	1,067	25	58	66	157	223
Difference	21	188	0	19	9	18	27

WELLS COMPLETED
ASHLAND COUNTY

Greene—W. C. Workman, Ohio Fuel Gas 1-4,527 ..... gas
Montgomery—Lola B. Smith, Ohio Fuel Gas 1-4,947 ..... gas

Wells completed 2
Gas 2

MEDINA COUNTY

Lafayette—Mary J. Young, Hulse & Kundtz 2 ..... gas
Harrisville—Alpha B. Rogers, Ohio Fuel Gas 1-4,954 ..... gas
Chatham—J. and A. Jelenscis, East Ohio Gas 13 ..... dry
Sanford-Watson, Oko Oil & Gas 34.. 5

Wells completed 4
Production 5
Dry 1
Gas 2

LORAIN COUNTY

Carlisle—F. W. Bruce, Ohio Fuel Gas 1-4,943 ..... gas
J. C. Palmer, Wiser Oil 5 ..... gas
W. T. McGuire, Daugherty Co. 1 .... gas

Wells completed 3
Gas 3

WAYNE COUNTY

Congress—W. C. Martin, Ohio Fuel Gas 1-4,921 ..... gas
Mary Hagerman, Ohio Fuel Gas 2-4,933 ..... gas
Chester—Mary E. Smyser, Faulkner & Co. 2 ..... gas
P. Buckholtz, Harmon & George 2 .. dry

Wells completed 4
Dry 1
Gas 3

HOLMES COUNTY

Richland—Alonzo Bucy, East Ohio Gas 2 ..... gas

ASHTABULA COUNTY

Conneaut—H. L. White, Schaeffer Brothers 1 ..... gas

KNOX COUNTY

Brown—Charles S. Pealer, Ohio Fuel Gas 1-4,893 ..... dry
Herbert Frank, Ohio Fuel Gas 1-4,894 dry
Rebecca J. Kunkle, Upham Gas 8 ... gas
E. Workman, Upham Gas 2 ..... gas
Jackson—Joseph Crider, Pure Oil 1 ... dry
Parker Mavis, Pure Oil 2 36

Wells completed 6
Production 36
Dry 3
Gas 2

COSHOCTON COUNTY

Monroe—Carpenter-Conkle-Wagers, Ohio Fuel Gas 1-4,919 78
Newcastle—French G. Allen, Hulse & Kundtz 2 20

Wells completed 2
Production 98

SUMMITT COUNTY

Franklin—John Steigner, F. A. Brendall & Co. 2 ..... gas
Bernard Kunz, F. A. Brendall & Co. 1 gas
F. B. Silk, Stolz Oil & Gas Corp. 1 .. dry
R. M. McCaughy, Rickenville Oil & Gas 1 ..... dry
Greene—John Beese, East Ohio Gas 1 . gas
Adam Kauby, East Ohio Gas 1 ..... gas
Carl Swartz, F. A. Brendall & Co. 2.. gas

Wells completed 7
Dry 2
Gas 5

LICKING COUNTY

Fallsburg—Jacob Weiss, Emerald Petroleum 2 50
Perry—Jacob Lothers, Settles Oil 7 ... gas
L. C. Giffin, Hope Const. & Refg. 3.. 10
Licking—T. C. Jury, Norpell & Co. 6 ... 10
Hanover—Florence Rector, Wehrle Gas 1 2
Homer Priest, Pure Oil 3 40
W. H. Richey, Hope Const. & Refg. 1 10
Charles O. Bannon, Hope Const. & Refg. 5 100

Wells completed 8
Production 222
Gas 1

ATHENS COUNTY

Ames—Thomas Fleming, Jr., Ohio Fuel Gas 2-4,968 ..... gas
Linna Dean, Orondorff & Co. 4 ..... gas
Berne—Guy M. Kasler, Ohio Fuel Gas 3-4,972 ..... gas
Athens—State Lands, State Oil & Gas Co. 10 ..... dry
Trimble—J. W. McDonald, Northern Development 1 ..... dry
Alexander—Sarah E. Penrod, Townsend Oil & Gas 2 2
Cannan—B. L. Pilcher, Edward Byron & Co. 1 1
B. L. Pilcher, Edward Byron & Co. 2 1
B. L. Pilcher, Edward Byron & Co. 3, 4, 5 ..... dry

Wells completed 11
Production 4
Dry 5
Gas 3

MUSKINGUM COUNTY

Falls—J. C. Moore, Ohio Fuel Gas 1-4,937 ..... gas
Hopewell—George L. Porter, Mid-East Gas 3 ..... gas
Rich Hill—William T. Osborne, Athey Co. 1 5
Clay—Mrs. M. Young, McIntyre & Guthrie 1 65
Chester Cannon, Craig, Adair & Co. 1 135
Perry—Smitley Family, Dr. G. C. Taylor 2 ..... gas
Irvin Nelson, Wittmer Properties Trus. 1 8
I. B. Baker, Wittmer Properties Trus. 1 30
Union—George Sherman, Athey Co. 1... dry
Maud Shepherd & Co., Athey Co. 2... dry
Thomas Mintier, Athey Co. 1 ..... dry
Salt Creek—C. L. V. Hunter, Athey Co. 1 ..... dry
Newton—James Ford, Mealick & Ford 1 gas

Wells completed 13
Production 243
Dry 4
Gas 4

MEIGS COUNTY

Sutton—Emma Williams, Preston Oil 4-1,393 10
William R. Lott, Tyree & Co. 5 3
A. E. Carnahan, Smith & Watterson 2 ..... dry
Rutland—Florence Mutchler, T. Chase & Co. 2 ..... gas
O. M. Stansbury, Linkous & Co. 1 ... gas
Bedford—William Thomas, Ohio Fuel Gas 1-4,896 ..... gas
Salisbury—Katherine Klein, W. H. Shipe & Co. 1 ..... gas
Roy C. Sansbury, Cochran & Co. 2 .. dry
Chester—Wesley Genheimer, Fick & Barnaby 9 4

Wells completed 9
Production 17
Dry 2
Gas 4

JACKSON COUNTY

Lick—P. Radcliff, Ohio Fuel Gas 1-4,907 ..... gas
Leon Evans, Penn Oil & Gas 3 ..... gas
Coal—Leonard T. Rice, Ohio Fuel Gas 1-3,438 ..... dry

Wells completed 3
Dry 1
Gas 2

VINTON COUNTY

Eagle—Addie Vickers, Ohio Fuel Gas 1-3,574 ..... dry
Knox—J. W. Stanley, Bell & Co. 4 4

Wells completed 2
Production 4
Dry 1

LAWRENCE COUNTY

Symmes—D. W. Rucker, Ohio Fuel Gas 1-4,892 ..... gas

TUSCARAWAS COUNTY

Oxford—J. C. Davis, Ohio Fuel Gas 1-4,912 ..... gas
Sugar Creek—William Menzie, Brick City Oil & Gas 2 ..... gas

Wells completed 2
Gas 2

STARK COUNTY

Tuscarawas—Martha Woods, Johnson & Stolz 1 ..... dry

GUERNSEY COUNTY

Wheeling—J. C. Alloway, Preston Oil 2-1,370 40
C. and A. Gray, North Salem Oil & Gas 5 30
E. C. Quillan, East Ohio Gas 4 50
A. A. Berlin, East Ohio Gas 1 60
C. and A. Gray, East Ohio Gas 7 50
Oscar A. Quillan, Capital Drilling 1.. 18
Jackson, W. D. Hague, Cambridge Glass 1 ..... dry

Wells completed 7
Production 248
Dry 1

BELMONT COUNTY

Somerset—D. L. Hague, William C. McBride 1 ..... gas
Union—C. and W. Shepherd, Frank Strange 5 ..... gas

Wells completed 2
Gas 2

PIKE COUNTY

Seal—G. Armontrout, Beasley & Co. 1... gas
Marion—Wilbur Gordon, Goddard & Co. 1 ..... dry

Wells completed 2
Dry 1
Gas 1

GALLIA COUNTY

Addison—John Brothers, Huston Oil & Gas 3 ..... dry

HARRISON COUNTY

Nottingham—Jess M. Keller, A. C. Phillips & Son 1 ..... dry
Rumley—J. F. Perry, Hendricks & Moore 4 2

Wells completed 2
Production 2
Dry 1

SOUTHEAST OHIO
WELLS COMPLETED
MONROE COUNTY

Nied, C. Burger 5 ..... dry
Carpenter, Preston Oil Co. 1 ..... gas
Winland, Southern Oil Co. 9 5
Wisenger, Robinson & Ball 1 5
Baker, Jacobsburg O. & G. Co. 1 ..... gas
Mallett, Cain & Co. 1 ..... gas

PERRY COUNTY

Sands, Sturms & Co. 1 1
Combs, O. F. G. Co. 2 50
Sagle, The Wehrle Co. 1 120
Young, Young & Co. 1 65
Boyd-Yocum lots, Westbrook Bros. & Co. 1 100
Baker-Bruner, Webb & Co. 1 145
Cannon, Adair, Lynch & Co. 1 110

HOCKING COUNTY
Cobb-Bradley, Squires & Co. 20 5
GUERNSEY COUNTY
Allway, O. F. G. Co. 2 50
Gray, E. O. P. & R. Co. 2 50
Millin, E. O. P. & R. Co. 4 50
A. Gray, Hartnick & Watson 4 45
Virtue, Ralston O. & G. Co. 2 40
O. A. Hillin, O. F. O. & G. S. Co. 1 ... 40
Sherer, Gasoline Oil Co. 2 30
HOLMES COUNTY
Yoder, O. F. G. Co. 1 ..... gas
MUSKINGUM COUNTY
Baker, Wittmer O. & G. P. 1 25
Nelson, Wittmer O. & G. P. 1 5
Smitley, Dr. C. C. Tayler & Co. 1 ..... dry
Shepard, Athy Oil Co. 1 ..... dry
Osborne, Athy Oil Co. 1 4
Ford, Melick O. & G. Co. 1 ..... gas
Porter, Mid-East Gas Co. 3 ..... gas
LICKING COUNTY
Rector, The Wehrle Co. 1 2
Ritchey, Hope C. & R. Co. 1 10
O'Bannon & Co., Hope C. & R. Co. 5 ... 50
Priest, Pure Oil Co. 3 40
Earhart, Pure Oil Co. 1 30
Jury, Ralph Norpell 3 10
Weiss, Emerald Pet. Co. 2 50
COSHOCTON COUNTY
Allen, Kundtz & Hulse 1 10
Workman, Upham Gas Co. 1 ..... gas
Pryor, O. F. G. Co. 1 ..... gas
Pealer, O. F. G. Co. 1 ..... gas
VINTON COUNTY
Stanley & Co., Farmer & Co. 1 3
Clark, Powers O. & G. Co. 1 8
State of Ohio, Athens State O. & G. Co. 1 1
Penrod, Townsend O. & G. Co. 1 2
NOBLE COUNTY
Crum, Cain & Co. 5 1
Charles, Schmidt & Co. 2 3
KNOX COUNTY
Mavis, Pure Oil Co. 2 20
Crider, Pure Oil Co. 1 ..... dry
MORGAN COUNTY
Eppley, Pure Oil Co. 2 20
MEIGS COUNTY
Williams, Preston Oil Co. 4 5
Lott, Tyree & Co. 5 4
Spencer, Hayzlett & Co. 5 1
Carnahan, Smith & Watterson 2 ..... dry
Genheimer, O. S. Barneby 9 4
Klein, Shipe & Co. 1 ..... gas
WASHINGTON COUNTY
McGinnis & Co., M. S. Lee 7 1
Ward, J. F. Ward 8 5
Greenwood, Zingiwe Bros. 3 10
Leasure, Turney & Co. 8 1
Henderson Oil Co., Henderson Oil Co. 2 1
Schnider, Henderson Oil Co. 2 2
Yonaly, Graham & Co. 2 5
HARRISON COUNTY
Perry, Moore-Hendricks O. & G. Co. 4. 2
JEFFERSON COUNTY
Becker, F. Becker, trustee 7 10

Wells completed 64
Production 1195
Dry 5
Gas 10

SOUTHWEST PENNSYLVANIA

WELLS COMPLETED
WASHINGTON COUNTY
John Finley, N. G. Co. of W. Va. 1 5
ALLEGHENY COUNTY
Pegher, M. M. Walley 1 5
Miller, Miller & Co. 1 ..... dry
Setzpfenndt, H. H. Hoff 1 2
Patton, Jacob Morris 2 3
Deitz, Beeler & McEvoy 1 1
Cull, Beeler & McEvoy 1 2
Logan, W. H. Boyd 5 5
Neely, C. C. Schuck 1 1
Eckert, Harbison & Co. 1 ..... gas
Hawthorn, E. E. Laughner 1 5
Pgh. Coal Co., Lockhart & Co. 1 ..... gas
Pgh. Coal Co., Walkover & Co. 1 ..... gas
GREENE COUNTY
Gregg, J. L. Garard 24 1

Wells completed 14
Production 30
Dry 1
Gas 3

WEST VIRGINIA

WELLS COMPLETED
HARRISON COUNTY
Goff, Nathan Goff 14 ..... gas
MARION COUNTY
Thomas, Sutton Bros. 1 ..... gas
Campbell, Monroe & Laughlin 1 ..... gas
MONONGALIA COUNTY
Fetty, So. P. O. Co. 3 1
WETZEL AND TYLER COUNTIES
Petitt & Co., Phila. Oil Co. 5 ..... dry
Mfrs. L. & H. Co., Mfrs. L. & H. Co. 2.. 25
Lancaster, Oakland O. & G. Co. 2 ..... gas
Bartrug, Carnegie Gas Co. 5 40
Mfrs. L. & H., Mfrs. L. & H. Co. 1 .... gas
MARSHALL COUNTY
Howard, G. B. Patterson 2 ..... gas
Huffman, Mfrs. L. & H. Co. 1 ..... gas
Phillippi, Mfrs. L. & H. Co. 1 ..... gas
McConnogua, Mfrs. L. & H. Co. 1 ..... gas
Carpenter, Mfrs. L. & H. Co. 1 ..... gas
DODDRIDGE COUNTY
Garner, Garner & Co. 1 5
Willis, Travis Bros. 1 ..... dry
Smith & Co., Phila. Oil Co. 2 10
RITCHIE COUNTY
Wilson & Co., E. E. Pope 7 10
Lambert, So. P. O. Co. 12 30
Perrine, Roberts & Co. 1 10
U. S. O. Co., McGinnis & Co. 8 ..... gas
Moats, Hope C. & R. Co. 1 ..... gas
Foy hrs., So. P. O. Co. 1 ..... gas
Hall hrs., Deem & Co. 4 ..... gas
McGinnis & Co., Warrior Pet. Co. 1 .... dry
Darling, J. E. Leach 1 ..... dry
Cain, Rexroad & Co. 1 1
GILMER COUNTY
Hardman, Hope C. & R. Co. 3 ..... dry
Ellis, Ellis O. & G. Co. 7 ..... dry
CLAY COUNTY
Phillips, So. P. O. Co. 7 20
Brown & Co., V. G. & O. Co. 20 12
Harshbarger, D. H. Stephenson 5 1
WOOD COUNTY
McDougal, Ekas & Gordon 2 ..... dry
Foley & Smith, Galbraith & Co. 1 1
PLEASANTS COUNTY
Cook, Tait Bros. & Co. 29 1
Dye, Tait Bros. & Co. 29 1
ROANE COUNTY
Nixon, So. P. O. Co. 15 ..... gas
Enoch hrs., Heck Oil Co. 4 20
Vandal, Hope C. & R. Co. 2 10
Dixon, Hope C. & R. Co. 1 ..... dry
CALHOUN COUNTY
Haught hrs., Richter Oil Co. 3 10
Bryner, W. H. Bickel 1 ..... gas
Bailess, W. H. Bickel 1 ..... dry
Barr, Hope C. & R. Co. 1 2
Johnson, W. H. Bickel 1 ..... gas
Jeffries, Snodgrass Bros. 1 ..... gas
KANAWHA COUNTY
Brown & Co., U. F. G. Co. 4,109 ..... gas
Bodkin, U. F. G. Co. 4,021 ..... gas
Queen Land Co., U. F. G. Co. 3,964 .... gas
BOONE COUNTY
Federal Coal Co., Pure Oil Co. 40 ..... gas
Stone & Co., Pure Oil Co. 1 ..... gas
Sutphin, G. L. Cabot 3 ..... gas
Dickenson, G. L. Cabot 3 ..... gas
Chew, U. F. G. Co. 1,847 ..... gas
Queen Land Co., U. F. G. Co. 3,964 .... gas
Sunday Creek C. Co., U. F. G. Co. 3,983 gas
Sunday Creek C. Co., U. F. G. Co. 3,993 gas
Blue Creek C. & L. Co., U. F. G. Co. 3,-959 ..... gas
Echols, Owens B. & M. Co. 1 ..... gas
Skinner & Zirkle, Ira Sayer 4 ..... gas
Griffith, Ira Sayer 1 ..... gas
WAYNE COUNTY
Wilson, W. U. Fuel G. Co. 26 ..... gas

Wells completed 62
Production 205
Dry 9
Gas 34

LIMA FIELD

Summary of Field Operations

	Com.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Wood	0	0	0	0	0	2	2
Hancock	4	50	0	2	0	7	7
Allen	1	40	0	0	1	1	2
Auglaize	0	0	0	0	1	2	3
Sandusky	3	25	1	0	0	0	0
Mercer	1	14	0	0	0	1	1
Seneca	4	1	3	0	0	8	8
Lucas	0	0	0	0	0	1	1
Ottawa	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	1	1
Wyandot	0	0	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Henry	0	0	0	0	0	1	1
Huron	0	0	0	0	0	2	2
Total Jan.	13	130	4	2	3	29	32
Total Dec.	16	145	7	2	5	31	36
Difference	3	15	3	0	2	2	4

WELLS COMPLETED
WOOD COUNTY
Freedom—Ed Driftmyer, August Bushman & Co. 6 ..... abd
Troy—W. H. Hartman, D. J. Klingman 1, 2 ..... abd

Wells abandoned 3

HANCOCK COUNTY
Liberty—John Shank, L. Cramer 5 25
Eagle—Alice Stauffer, Star & Clark 17 25
Delaware—M. N. Bennett, Harmon, Watts & Talbot 1 ..... gas
Wm. Bristol, Ryan & Co. 1 ..... gas

Wells completed 4
Production 50
Gas 2

ALLEN COUNTY
Bath—Steve Zelno, Eugene Rohlman & Pease 2 40
E. F. Sandy, C. A. and F. J. Peavy 1 abd
C. A. and W. F. Landes, Ira P. Post 2 ..... abd
Jackson—J. T. Driver, Ira P. Post 1.. abd

Wells completed 1
Production 40
Abandoned 3

SANDUSKY COUNTY
Washington—A. E. Waggoner, W. C. Richards & Co. 10 20
Mike Boyer, Gibsonburg Oil 1 5
Ballville—Chas. Ziegler, McPherson & Co. 1 ..... dry

Wells completed 3
Production 25
Dry 1

MERCER COUNTY
Union—T. G. Fireovid, Margaret E. Grace & Co. 6 14
SENECA COUNTY
Clinton—Ella Swander, Geyer & Shaul 1 1
Pleasants—Harry Beck, Hulce & Co. 2 dry
Hopewell—Peter Ryman, Penn Ohio O. & G. 1 ..... dry
Rachel Snyder, R. C. Jones 1 ..... dry

Wells completed 4
Production 1
Dry 3

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Adams	0	0	0	0	0	2	2
Gibson	0	0	0	0	0	6	6
Pike	7	99	1	1	0	4	4
Daviess	2	15	0	0	0	1	1
Clay	1	0	1	0	0	0	0
Vigo	0	0	0	0	1	3	4
Spencer	0	0	0	0	0	4	4
Warrick	0	0	0	0	0	2	2
Perry	0	0	0	0	0	4	4
Fountain	0	0	0	0	0	1	1
Greene	0	0	0	0	0	2	2
Crawford	0	0	0	0	0	1	1
Lagrange	0	0	0	0	0	1	1
Posey	0	0	0	0	1	1	2
Johnson	0	0	0	0	0	1	1
Putnam	0	0	0	0	0	1	1
Morgan	0	0	0	0	0	1	1
Marshall	0	0	0	0	1	1	2
Monroe	0	0	0	0	0	1	1
Lake	0	0	0	0	0	1	1
Decatur	2	0	0	2	0	0	0
Hancock	3	0	0	3	0	0	0
Harrison	2	0	0	2	0	0	0
White	0	0	0	0	0	1	1
Total Jan.	17	114	2	8	3	39	42
Total Dec.	11	248	2	2	4	41	45
Difference	6	134	0	6	1	2	3

WELLS COMPLETED
PIKE COUNTY
Clay—Charles McAtee, Lee & Cox, trustees, 1 65
Fred Lindy, William Bell & Co. 2 ... 10
John Ford, Indiana Oil & Gas Corp. 1 dry
Della Kime, Charles C. Taliaferro, Jr., 5 19
Mary McAtee, Charles C. Taliaferro, Jr., 2 ..... gas
Logan—Rubert Walton, C. L. Diver 1.. 4
Washington—Byron Preston, L. N. Savage & Co. 2 1
Patoka—H. J. Wiggs, Three Sands Oil 8, 9 ..... abd
Mary E. Coleman, Murphy Oil 3 ... abd
Monroe—John Yeager, Murphy Oil 2 ... abd

Wells completed 7
Production 99
Dry 1
Gas 1
Abandoned 4

DAVIESS COUNTY
Veale—J. M. Peak, L. G. Gee & Co. 3... 10
Perry Ross, Ross & Hensley 1 5

Wells completed 2
Production 15

CLAY COUNTY
Posey—W. J. Butt, Sisi Oil Corp. 1 .. dry
DECATUR COUNTY
Greensburg—Ira Hutchinson, Hoosier Public Utility 3, 4 ..... gas

Wells completed 2
Gas 2

HANCOCK COUNTY
Charlottsville—E. Ramsey, Knightstown Nat. Gas 1, 2 ..... gas
Mary Reed, Knightstown Nat. Gas 1. gas

Wells completed 3
Gas 3

HARRISON COUNTY
Harrison—Alfred Stephens, Laconia Fuel & By-Products 1, 2 ..... gas

Wells completed 2
Gas 2

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Clark	1	0	1	0	0	0	0
Crawford	6	65	2	0	1	3	4
Lawrence	4	22	1	0	1	0	1
Wabash	4	33	1	0	0	2	2
Clinton	0	0	0	0	0	2	2
Effingham	0	0	0	0	0	1	1
Randolph	0	0	0	0	0	2	2
Madison	0	0	0	0	0	1	1
Monroe	1	10	0	0	0	3	3
Washington	0	0	0	0	0	1	1
St. Clair	9	260	2	0	1	24	25
Total Jan.	25	390	7	0	3	39	42
Total Dec.	43	1,252	17	0	1	56	57
Difference	18	862	10	0	2	17	15

WELLS COMPLETED
CLARK COUNTY
Westfield—M. L. Briscoe, Alspaugh & Co. 1 ..... dry
CRAWFORD COUNTY
Oblong—Viola Dees, Associated Producers 6 1
Montgomery—J. F. Huggins, L. C. McDowell & Co. 14 8
Prairie—O. H. Smith, Porterville Oil Co. 1 6
William Akerman, O. R. Oil & Gas 4. 50
John McClain, Arkansas Fuel Oil 1.. dry
John Vaughn, Arkansas Fuel Oil 1 . dry

Wells completed 6
Production 65
Dry 2

LAWRENCE COUNTY
Dennison—L. A. Buchanan, Ohio Oil 47. 10
L. A. Buchanan, Ohil Oil 21 ..... abd
A. B. Buchanan, Ohio Oil 19 2
A. B. Buchanan, Ohio Oil 20 10
J. B. Jett, Ohio Oil 1 ..... abd
A. B. Jodon No. 2, Ohio Oil 2 ..... abd
Petty—L. O. Havill, Skidmore & Co. 1. dry
Lawrence—Tom Whittaker, Associated Prod. 1 ..... abd
J. W. England Ohio Oil 1 ..... abd

Wells completed 4
Production 22
Dry 1
Abandoned 5

WABASH COUNTY
Wabash—Cisil heirs, Cisil Heirs Oil 5 .. 18
John Payne, Arkansas Fuel Oil 2 ... dry
J. H. Cisil, W. C. McBride, Inc., 7... 10
Winnie Sparks, Joe S. Young, Jr., & Co. 3 5

Wells completed 4
Production 33
Dry 1

MONROE COUNTY
Location 4—Demint-Hardy, Abbott & Connelly 1 10
ST. CLAIR COUNTY
Sugar Loaf—G. L. Tarlton, Ohio Oil 5.. 90
I. S. Gaskill, Ohio Oil 3 60
Fred Metler, Ohio Oil 1 30
George Lindemann, Ohio Oil 2 27
Fred Metler, H. & M. Operating 3 ... 30
Mrs. Felix Zeller, Clarence Roques & Co. 1 15
O. Anderlan, Hans Wolf 1 8
Christ Becker, Duncan Brothers 1 .... dry
Fee, Columbia Quarry Co. 2 ..... dry
Baptist Church, Carney & Co. 1 ..... abd

Wells completed 9
Production 260
Dry 2
Abandoned 1

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Muskegon	2	50	0	0	0	9	9
Isabella	14	3,570	1	0	17	40	57
Midland	2	1,300	0	0	5	19	24
Kent	0	0	0	0	2	2	4
Ottawa	1	0	1	0	0	1	1
Oceana	1	0	1	0	1	6	7
Mason	0	0	0	0	0	3	3
Manistee	0	0	0	0	1	2	3
Lake	0	0	0	0	0	4	4
Newaygo	1	0	1	0	2	9	11
Cass	0	0	0	0	1	4	5
Tuscola	0	0	0	0	0	1	1
Clare	1	0	1	0	2	3	5
Montcalm	0	0	0	0	0	2	2
Alpena	0	0	0	0	1	1	2
Saginaw	1	35	0	0	0	1	1
Delta	0	0	0	0	0	1	1
Kalkaska	0	0	0	0	2	1	3
Branch	0	0	0	0	0	1	1
Barren	0	0	0	0	0	1	1
Ingham	0	0	0	0	0	1	1
Iosco	0	0	0	0	2	0	2
Eaton	0	0	0	0	0	1	1
Montmorency	0	0	0	0	1	0	1
Gratiot	0	0	0	0	5	5	10
Monroe	0	0	0	0	2	1	3
Jackson	0	0	0	0	1	0	1
Allegan	0	0	0	0	3	1	4
Kalamazoo	0	0	0	0	0	1	1
Presque Isle	0	0	0	0	1	0	1
Huron	0	0	0	0	1	0	1
Sanilac	0	0	0	0	1	0	1
Calhoun	0	0	0	0	1	0	1
Livingstone	0	0	0	0	0	1	1
Total Jan.	23	4,955	5	0	52	122	174
Total Dec.	38	2,505	8	5	68	107	175
Difference	15	2,450	3	5	16	15	1

WELLS COMPLETED
MUSKEGON COUNTY
Muskegon—J. J. Fagan, Section 10 Oil Synd. 1 25
E. F. Plunkett, Reed Oil 2 25

Wells completed 2
Production 50

ISABELLA COUNTY
Chippewa—Harkins, Pure Oil 2 700
Sarah Roebuck, Pure Oil 3 300
J. Fox, Pure Oil 6 400
W. D. Gibson, Pure Oil 6 200
State-Isabella, Pure Oil A-3 75
State-Isabella, Pure Oil B-3 200
F. Eastman, Dixie Oil 1 250
Joslyn, Chippewa Oil & Gas 6 115
Joslyn, Chippewa Oil & Gas 7 500
Hughes Berry, Gordon Oil 1 100
McClintic, Leonard Oil & Gas 6 300
McClintic, Leonard Oil & Gas 4 370
Morris-Bortz, Mt. Pleasant Dev. 2 ... 60
Denver—Keeler-Weidman, Chippewa Oil & Gas 1 ..... dry

Wells completed 14
Production 3570
Dry 1

MIDLAND COUNTY
Greendale—Reems, Pure Oil C-4 800
Reems, Pure Oil C-3 500

Wells completed 2
Production 1300

OTTAWA COUNTY
Chester—C. E. Moe, Michigan Petroleum Corp. 1 ..... dry
OCEANA COUNTY
Golden—Fiel, Red Rock Oil 1 ..... dry
NEWAYGO COUNTY
Goodwill—M. Miller, Pennsylvania Oil & Gas 1 ..... dry
CLARE COUNTY
Near Lake Station—Frank Salters, Decem Development 1 ..... dry
SAGINAW COUNTY
Saginaw—Spatz, Saginaw Prospecting 75 35

NEW TEXAS LEASE BILL

A bill creating a board to direct the sale of oil and gas by lease on Texas prison lands has been passed by the house and senate and sent to Governor Moody for signature. The board would consist of the commissioner of the General Land Office, the attorney-general and the chairman of the prison board, and would be directed to cause the prison lands to be surveyed and subdivided into lots or blocks to facilitate the advantageous sale of oil and gas leases.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE STATEMENT FOR DECEMBER, 1929

Runs

Company—	Month (bbls.)	Dly. av. (bbls.)
Prairie P. L. Co.*	4,743,000	153,000
Gulf P. L. Co.	1,860,414	60,013
Texas P. L. Co.	764,991	24,677
Magnolia P. L. Co.	1,755,608	56,633
Empire P. L. Co.	1,710,379	55,173
Cosden P. L. Co.	891,112	28,745
Sinclair P. L. Co.*	3,131,000	101,000
Oklahoma P. L. Co.	3,245,063	104,679
Other lines*	5,549,000	179,000
Total December	23,650,520	762,920
Total November	22,612,786	753,760
Difference	1,038,034	9,160

Shipments

Prairie P. L. Co.†	6,410,734	206,798
Gulf P. L. Co.	2,975,333	66,946
Texas P. L. Co.	972,639	31,375
Magnolia Pet. Co.	2,231,518	71,984
Empire P. L. Co.	1,276,946	41,192
Cosden P. L. Co.	1,198,482	38,661
Sinclair P. L. Co.	3,548,337	114,462
Oklahoma P. L. Co.	3,227,980	104,128
Other lines*	6,138,000	198,000
Total December	27,079,969	873,546
Total November	26,807,089	893,570
Difference	272,880	20,024

Stocks

Prairie O. & G. Co.*	38,594,700
Gulf P. L. and Gypsy Oil Co.	9,922,691
The Texas Company	6,850,293
Magnolia Pet. Co.	7,594,960
Empire P. L. Co.	6,185,342
Mid-Continent Petroleum Corp.	3,421,846
Sinclair Crude Oil Pur. Co.*	19,914,000
Carter Oil Co.	9,361,892
Oklahoma P. L. Co.	3,711,384
Other companies*	24,703,000
Total December	130,257,108
Total November	131,355,426
Difference	901,682

*Estimated. †Prairie P. L. shipments inclue Texas crude oil and Sinclair shipments include Texas and Wyoming crude oil.

EASTERN PIPE LINE REPORT FOR MONTH OF JANUARY

Runs from Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Indiana and Michigan for December and January:

	Dec., '29	Jan., '30
Nat. Transit	451,222.47	439,729.00
S. W. Pa. P. L.	86,078.43	90,898.30
Eureka P. L.	364,779.55	367,547.89
Buckeye P. L. (Macksburg)	352,447.91	358,430.62
Buckeye P. L. (Cleveland)	9,993.96	10,647.91
Buckeye P. L. (Lima, etc.)	90,018.07	85,676.96
Indiana P. L.	4,720.28	3,482.83
Cumberland P. L.	189,528.30	182,383.51
N. Y. Transit	34,104.38	37,659.17
Tidewater P. L.	25,495.45	24,115.65
Pure Oil	277,181.96	305,214.10
Paragon Dev.	11,059.01	10,541.45
Stoll Oil Ref.	4,362.88	3,899.80
Bradford Trans.	410,395.25	432,916.17
Total	2,311,387.90	2,353,143.36
Daily average	74,560.90	75,907.85

Note—Paragon Refining Co. had other receipts of 156,022.98 bbls. Paragon Development had other receipts of 194.62 bbls. Indian Refining Co. had other receipts of 448,345.12 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for December and January:

	Dec., '29	Jan., '30
Nat. Transit	596,904.16	566,559.42
S. W. Pa. P. L.	328,907.79	292,868.36
Eureka P. L.	217,339.67	261,587.52
Buckeye P. L. (Macksburg)	209,875.38	188,277.50
Buckeye P. L. (Cleveland)	1,700.86	2,188.64
Buckeye P. L. (Lima, etc.)	895,636.25	900,037.30
Indiana P. L.	1,426,181.84	1,549,996.22
Cumberland P. L.	222,397.86	238,821.39
Southern P. L.	65,068.35	62,190.22
N. Y. Transit	164,584.79	189,945.65
Northern P. L.	201,259.03	196,645.06
Tidewater P. L.	510,717.25	392,513.08
Pure Oil	281,593.22	270,432.99
Paragon Ref.	172,635.39	157,944.28
Indian Ref.	.....	461,663.58
Paragon Dev.	10,374.82	10,643.37
Bradford Trans.	468,781.60	486,905.56
Tuscarora Oil	.....	517,121.55
Total	5,773,978.26	6,746,341.69
Daily average	186,257.36	217,623.92

Indian Refining Co. reported other deliveries of 461,663.58 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky and Indiana at the close of December and January:

	Dec., '29	Jan., '30
Nat. Transit	703,855.97	787,014.24
S. W. Pa. P. L.	531,541.47	511,042.96
Eureka P. L.	1,514,703.17	1,427,435.53
Buckeye P. L. (Macksburg)	476,862.16	609,936.03
Buckeye P. L. (Cleveland)	70,466.79	85,063.78
Buckeye P. L. (Lima, etc.)	4,286,296.85	4,764,964.92
Indiana P. L.	652,701.92	742,902.49
Cumberland P. L.	523,373.23	470,501.33
Southern P. L.	323,184.71	316,573.11
N. Y. Transit	216,820.01	310,237.52
Northern P. L.	437,683.50	569,978.67
Tidewater P. L.	868,271.09	915,732.49
Pure Oil	22,924.46	64,343.78
Paragon Ref.	31,470.68	29,271.88
Indian Ref.	156,562.07	142,934.08
Paragon Dev.	6,037.00	6,142.46
Tuscarora	267,197.45	266,285.45
Bradford Trans.	164,000.93	199,625.21
Total	11,253,953.46	12,220,045.93
Increase	.....	966,092.47

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern Pipe Lines at the close of December and January showing gross stocks of the above fields:

	Dec., 1929	Jan., 1930
Penna.	3,454,908.10	3,617,731.86
Lima	628,606.65	687,915.50
Kentucky	625,239.17	540,503.40
Mid-Continent	6,488,845.03	7,267,468.33
Illinois	44,576.48	55,156.42
Michigan	11,778.03	51,270.42
Total	11,253,953.46	12,220,045.93

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil field for the past four years:

	1927	1928	1929	1930
Jan.	56,209	52,904	51,749	75,907
Feb.	61,298	57,002	51,833	.....
Mar.	63,247	57,485	54,252	.....
Apr.	60,927	56,812	58,444	.....
May	60,284	62,067	59,902	.....
June	62,757	58,230	58,833	.....
July	58,674	57,144	66,087	.....
Aug.	60,870	57,745	66,087	.....
Sept.	60,285	53,487	67,315	.....
Oct.	147,080	58,100	76,093	.....
Nov.	57,275	53,865	74,831	.....
Dec.	53,089	52,025	74,561	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1927	1928	1929	1930
Jan.	141,227	146,465	165,721	217,623
Feb.	138,534	167,368	159,387	.....
Mar.	133,777	158,883	161,474	.....
Apr.	140,227	172,935	169,737	.....
May	144,594	180,559	184,281	.....
June	149,772	188,024	185,404	.....
July	151,850	189,470	194,763	.....
Aug.	188,653	192,853	184,946	.....
Sept.	144,213	194,138	201,214	.....
Oct.	147,036	176,000	191,367	.....
Nov.	150,975	176,898	202,743	.....
Dec.	144,504	173,572	186,257	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1928	1929	1930
Jan.	12,276,710	7,596,564	12,220,045
Feb.	12,180,419	8,738,835	.....
Mar.	12,239,725	9,002,058	.....
Apr.	11,740,125	8,978,172	.....
May	11,602,468	8,903,560	.....
June	11,287,678	8,921,275	.....
July	10,819,331	9,211,595	.....
Aug.	10,236,743	9,440,643	.....
Sept.	9,660,910	9,443,067	.....
Oct.	9,229,709	9,441,101	.....
Nov.	8,366,553	9,868,538	.....
Dec.	7,539,555	11,253,953	.....

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, Feb. 1	2,368,730.24
Runs from wells	519,272.30
Other receipts	343,257.16
Regular deliveries	474,902.13
Other deliveries	449,109.92

The amount of Illinois oil run by the Tide Water Pipe Co. in January was 24,-115.65 bbls. Deliveries were 23,391.80. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

	Runs	Deliveries
1930—		
Jan.	543,387.95	498,293.93
1929—		
Jan.	570,727.38	545,084.66
Feb.	517,320.17	503,387.70
Mar.	728,319.67	586,049.60
Apr.	516,374.27	654,297.96
May	608,981.60	673,812.83
June	568,454.70	818,345.97
July	611,106.79	828,159.44
Aug.	625,351.99	746,425.06
Sept.	582,457.66	669,947.72
Oct.	662,302.83	558,558.68
Nov.	565,108.75	427,064.63

Tide Water Pipe Co., Ltd., also delivered in January, 99,499.88 bbls. Oklahoma oil.

Franklin Pipe Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1928—	Runs	Shipments	Stocks
December	3,053.60	3,167.53	19,426.99
1929—			
January	2,099.90	.....	19,313.06
February	2,469.47	6,873.20	17,009.23
March	3,330.82	3,595.01	16,745.04
April	4,864.07	4,243.59	17,365.52
May	2,688.59	2,455.54	17,598.57
July	2,947.62	3,329.35	4,503.48
August	2,742.72	2,889.47	4,356.74
September	2,925.71	2,897.34	4,385.11
October	3,083.59	1,754.94	5,713.76

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
March	19,903	968	31,258	18,581	7,355	78,065	.....	.....	.....	.....	....	78,065
April	16,667	....	32,333	13,233	2,234	64,467	.....	.....	.....	.....	7,833	65,200
May	16,226	2,416	31,326	10,806	2,129	62,903	.....	.....	.....	.....	....	62,903
June	14,866	3,167	23,100	10,300	6,100	57,533	.....	.....	.....	.....	....	57,533
July	15,387	4,806	34,290	19,388	2,452	76,323	.....	.....	.....	.....	4,161	80,484
August	20,389	3,129	35,226	18,903	5,548	83,194	.....	.....	.....	.....	12,161	95,355
September	19,433	....	31,834	11,900	6,200	69,367	.....	.....	.....	.....	4,800	74,167
October	9,065	4,677	42,065	12,000	9,677	77,484	.....	.....	.....	.....	4,097	81,581
November	18,900	3,167	41,667	14,699	3,767	82,200	.....	.....	.....	.....	2,400	84,600
December	12,968	....	46,129	13,613	7,225	79,935	.....	.....	.....	.....	2,335	82,290

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
March	18,548	26,064	145,516	39,162	28,162	257,452	....	42,581	2,322	....	44,903	302,355
April	19,733	18,367	137,233	50,267	22,567	248,167	6,867	25,066	10,367	1,500	43,800	291,967
May	29,806	19,258	138,000	49,936	22,322	259,322	6,677	26,323	3,000	1,323	37,323	296,645
June	31,433	8,667	134,600	42,967	18,300	235,967	8,600	22,633	11,800	2,033	45,066	281,033
July	40,097	15,129	111,677	43,420	31,516	241,839	4,774	12,097	9,516	161	26,548	268,387
August	33,387	14,355	162,644	30,936	20,355	261,677	4,226	12,742	....	1,484	18,452	280,129
September	32,967	9,000	136,633	54,300	32,900	265,800	6,900	22,900	5,367	1,333	36,500	302,300
October	39,936	10,519	137,096	38,160	38,644	264,355	6,613	13,388	11,064	4,419	35,484	299,839
November	23,633	18,900	125,200	41,100	28,200	237,033	2,233	12,533	6,667	2,500	23,933	260,966
December	29,774	15,387	133,742	31,000	23,775	233,678	5,548	16,484	6,613	1,774	30,419	264,097

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES FOR 12 MONTHS

(In Barrels of 42 Gallons)

1929-30—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
January:	Month	23,385,939	22,575,874	23,412,226	2,861,641	2,463,526	1,807,887	2,076,070	3,439,000	82,012,163
	Daily average	754,385	728,254	755,233	92,311	79,146	58,318	66,970	110,936	2,645,554
February:	Month	22,300,707	20,464,164	20,816,209	2,557,968	2,154,194	1,569,930	1,965,656	3,113,000	74,941,828
	Daily average	796,454	730,863	743,484	91,356	76,936	56,068	70,202	111,184	2,676,494
March:	Month	24,324,729	20,838,262	24,358,592	2,951,076	2,303,734	1,756,153	2,195,823	3,586,000	82,314,369
	Daily average	784,669	672,202	785,761	95,196	74,314	56,650	70,838	115,677	2,655,302
April:	Month	23,295,060	20,235,390	23,493,097	3,112,740	2,188,680	1,702,497	2,085,030	3,524,000	79,636,494
	Daily average	776,502	674,513	783,102	103,758	72,956	56,750	69,501	117,467	2,654,550
May:	Month	24,053,351	21,345,453	24,489,101	3,665,099	2,220,158	1,713,261	2,252,522	3,879,000	83,617,945
	Daily average	775,915	688,563	789,965	118,229	71,618	55,267	72,262	125,129	2,697,353
June:	Month	24,624,627	20,561,112	24,698,029	3,636,150	2,112,270	1,699,581	2,180,752	3,887,000	83,399,521
	Daily average	820,821	685,371	823,267	121,205	70,337	56,653	72,692	129,567	2,779,984
July:	Month	26,796,627	22,371,925	26,969,989	3,867,157	2,137,047	1,716,488	2,360,836	4,439,000	90,659,069
	Daily average	864,407	721,675	869,997	124,747	68,937	55,370	76,156	143,200	2,924,486
August:	Month	27,233,353	22,429,522	27,491,362	3,816,555	2,086,083	1,764,973	2,478,016	4,363,000	91,662,864
	Daily average	878,495	723,532	886,818	123,115	67,298	56,934	79,936	140,742	2,956,866
September:	Month	26,104,264	21,299,490	26,057,065	3,780,690	1,959,720	1,718,250	2,347,020	4,075,000	87,351,499
	Daily average	870,142	709,983	868,902	126,023	65,324	57,275	78,234	135,917	2,911,716
October:	Month	26,895,160	20,821,646	26,412,167	3,429,468	2,000,027	1,956,326	2,392,952	4,482,000	88,389,746
	Daily average	867,586	671,666	852,004	110,628	64,517	63,107	77,192	141,358	2,851,282
November:	Month	21,317,540	19,193,760	24,896,034	3,430,560	1,911,060	1,853,565	2,350,110	4,029,000	78,981,629
	Daily average	710,585	639,798	829,868	114,352	63,702	61,785	78,337	134,300	2,632,720
December:	Month	21,705,554	20,092,876	25,609,823	3,549,066	1,917,071	1,878,352	2,378,754	4,168,100	81,299,596
	Daily average	700,179	648,156	818,394	114,486	61,841	60,592	76,734	134,455	2,622,568
Total 12 months		292,036,911	252,229,474	298,713,694	40,658,170	25,443,570	21,137,263	27,063,541	46,984,100	1,004,266,723
Daily average		800,101	691,040	818,394	111,392	69,708	57,910	74,147	128,724	2,751,416

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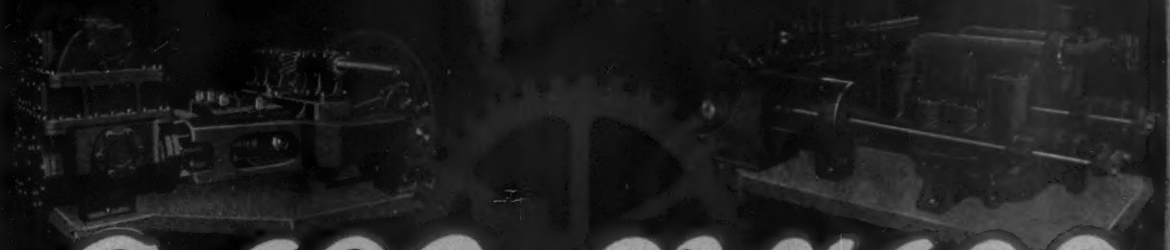

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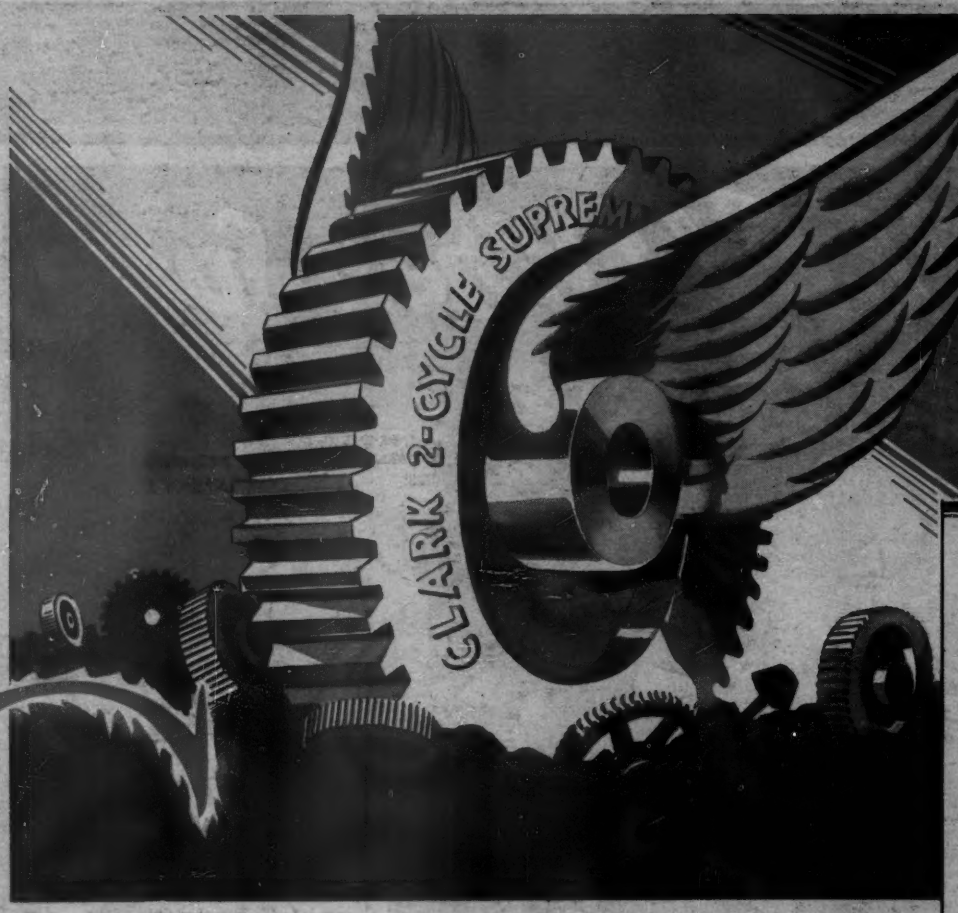

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